An Address
ON
SOME POINTS IN MEDICAL EDUCATION.

Delivered at the University College, Bristol, on Nov. 21st, 1894, after the giving away of the Prizes.

By THOMAS BRYANT, M.Ch., F.R.C.S. Eng. & Irel.,

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MR. PRESIDENT, LADIES AND GENTLEMEN,—The duties which I have just discharged have given me much pleasure, for as a representative of the Royal College of Surgeons of England upon the Council of this College, and a member of the staff of the school of Guy's Hospital, founded in 1826, it is pleasant to be called upon to perform some service, however small, to a provincial school of such eminence as yours, and which is but six years junior to the one with which I am connected. And this feeling is not lessened by the knowledge that both institutions have during these many years had much influence for good upon the medical education of this country, and that at the present time some of your valued teachers have been educated at Guy's Hospital.

The leading thought which has been raised in my mind by the steady stream of intelligent students as it passed before me is of a mixed nature; for, in addition to the satisfaction I experienced in handing rewards for work well done to the happy recipients who gained them, I realised, as I exchanged glances with each pair of eyes, what a power for good or for evil this old school was turning out into the world; and I know from past experience that the issue, whatever it may be, will have to be determined by forces which are as yet insufficiently developed or too uncertain to enable any of us to predicate their results. We lookers-on can only hope for the best; but you students, upon whose future we are speculating, can determine that they shall be good, for the problem as to what you will do with your lives is in your own hands, and as free agents you have to work it out. At any rate, gentlemen, you have commenced life well, for by joining this College you have at an early period of manhood settled the chief problem a man in his early educational career is called upon to solve, and that is, What is to be done with his life? What calling in life is he to follow? For let me tell you that in every man's life the sooner this problem is decided the better, since it is true that many educated men find it so difficult that they never solve it, but drift through life, and often go out of life, before they have resolved how to live in it. You, by entering the medical profession, have settled the problem once for all; and, having done so, have now, as students of this College, only to march forward under the guidance of your valued teachers to secure victory. But let me remind you that the success you will ultimately achieve will be commensurate with your own individual exertion, and be largely determined by the motives and principles which animate all your actions. The profession of your choice is the most human and needful of all the arts of life. In its study you will find a scheme of life the unravelling of which ought to satisfy all the reasonable wants of human nature, since its pursuit calls into play every faculty we possess, and often makes us wish that some of our senses were more acute. It supplies our reasoning powers with problems the most mixed complicated, and intricate in the whole range of science, and consequently gives food for unending thought and intellectual ingenuity. It lays open to our scrutiny the workings and mysteries of man's mixed nature, and enables us to trace the influence of the "vein of gold" which was originally breathed into and embodied in us all, even in the most debased or unfortunate of our kind. It furnishes opportunities for the exercise of all our better feelings and at the same time supplies object lessons as arguments for the suppression of the lower. The practice of our profession, moreover, fairly well fulfils the purposes for which it is intended, and at the same time, with few exceptions, provides a reasonable reward and remuneration for work when well accomplished. It is doubtless the desire of you all to do this work well and to make yourselves good medical practitioners. I am willing to help you in this determination, and if you will allow me to tax your attention for a few minutes I will point out to you some of the means which I regard as valuable towards the realisation of that object.

I need not say anything in favour of the necessity of industry and energy in all you do, for without these qualities no work can prosper and no progress can be made; but I would have you bear in mind that knowledge, in order to become available, must first of all be made your own by thought and individual effort. A series of facts, or a pretty theory which these facts are made to support, may be so artistically and convincingly placed before you, as to lead your fresh and ready minds to accept them without question; but these facts and the theory based upon them will be of little use to you unless you have, by thought and consideration, made the information your own. So let me, therefore, ask you as students to make every effort to maintain your individuality and to work and think for yourselves; be not content simply to take in what you read, what you are taught, with open eyes and ears, and possibly gaping mouths, but think over every fresh piece of knowledge you may acquire, and assimilate it mentally before you venture to take in more. In your study of anatomy dissect carefully for yourselves, criticise closely the relations of the parts as you display them, and the bearings of such relations to other work, particularly to surgical work. In fact, work for yourselves, think for yourselves, and trust to yourselves in all you do. If you adopt this practice as a rule of life, you will in the study of anatomy feel the necessity of dissecting more, for you will discover that no teaching by lectures or demonstrations, however cleverly given, will yield you the results which are in any way comparable to that gained by personal dissection. No study of physiology or chemistry by books or lectures will equal that acquired by personal industry in the laboratories. No reading, lecturing, or coaching will ever teach a student the practice of medicine and surgery without personal observation and serious thought at the bedside of the sick and the out-patient department of a public hospital. How, let me ask, can a student learn midwifery, with all its difficulties, without personal experience well thought over? How can he acquire any knowledge of pathology without prolonged and assisted study in the post-mortem room? In fact, how is it possible for a student to learn the art of medicine and surgery, or, indeed, any of the arts that lead up to it, without personal practice and reflection upon such practice? How much or how little modern modes of education have helped or hindered this desirable individual exertion in students generally I must not now stop to argue, although I may express my belief—and I do so with regret—that our teaching has become far too grandmotherly, and that our students are too much disposed to trust to external help, rather than to their own personal exertions. That much of this overteaching has been brought about by the close competition of schools and the anxious desire of all teachers to give their very best to their pupils by means of lectures and demonstrations, in order that the schools to which they belong should show good results, is an argument which cannot be questioned, any more than that the same effect has been helped by the vast improvements in students' text-books and the high character of all illustrated anatomical and other works. For difficult subjects by those means have been made clear, and all subjects so readily intelligible as to lead students to think they know when they only half know, and to believe that personal effort is less required of them than it was of their forefathers. In fact, at the present day, help is so freely given to students by the younger teachers in schools, and all information is so well arranged and boiled down by tutors before it is imparted, that the hungry student may be pardoned for believing that what he has so readily acquired under those circumstances is food with some stay in it, and that it is not only enough to pass him through his examinations, but likewise enough to start and maintain him later in professional practice. I need not say that this hope too often proves to be a delusion, and that as soon as the student's knowledge is brought to the test he discovers by sad experience that information easily acquired easily departs, and that, should his own stock prove to be, with some special outside assistance, enough to help him over the "stile of examination," even with credit, he will soon be made to doubt the depth of his knowledge when he comes to his second "stile—that of partial responsibility," when no help is at hand to guide him over; and when he reaches the next goal—the "Stile of Practice"—at which the weight of full responsibility falls upon him, the deficiency of his knowledge

becomes fully realised, much to his own sorrow and possible sorrow of those he may be called upon to treat. Let me, therefore, urge you not to be mere passive recipients of information, even during your student life, however well information may be laid before you; but from your first entrance into professional life to make individual exertion and individual thought the solid foundation of all your knowledge, so that when you leave this College and embark upon the apparently uncertain prospects of a professional career, you will not only have acquired true knowledge and learnt how to use it, but will have acquired what is better, habits of life and thought which will never leave you, but which will help you to remain students all your lives, and thus to become wiser and better men.

I must next ask you from your earliest introduction into professional life to cultivate the full use of your special senses, and more particularly that of sight. Indeed, let me strongly advise you to begin your examination of every case, medical or surgical, by a careful general visual inspection, and of every localised surgical case by having a good look at the part which may be injured or affected. From the ordinary ways of students as seen at examination halls and hospitals it might be thought that the use of the eyes was deemed to be of quite secondary importance, since it is a very general rule of practice for students to begin their examination of any local affection by means of the sense of touch as displayed by manipulation, and that not always conducted in a very gentle way. I will ask you, therefore, to resist this very common inclination, and to make it a rule of life to cry "Hands off" in every case before you have well looked at it and noted in what way the injured or affected part is found to differ from the normal or unaffected part on making the comparison. By so doing you, who have not carried out this practice as a routine habit, will often be startled at the suggestiveness of the points elicited by your visual examination and how far you have by it alone been led towards making a working diagnosis of the case before you—a diagnosis which has only to be supported or refuted by your manipulative and such other methods of examination as may be called for, to enable you to form a sufficiently definite diagnosis of your case with a view to its treatment. During the years it was my privilege to hold the office of examiner at the Royal College of Surgeons of England and elsewhere, it was my constant habit to test the knowledge of students by these means, and it was a pleasure to watch in good men, who had educated their sense of sight and their reasoning powers upon what they saw, the smile of satisfaction which beamed upon their countenances as the highly probable nature of the case before them was worked out by the indications of sight alone, and had only to be finally settled or corrected by collateral evidence. As a bedside exercise for students, and one to which, in the interest of patients, objections can hardly be raised, I know of no method by means of which more educational good can be achieved. The exercise can be well conducted by students for students to their mutual advantage. In exercising the sense of touch I must say one word in favour of gentleness, since by its adoption more is to be gained as a rule than by rougher methods; and at the same time less harm is done. Gentleness saves not only pain to the patient, which is no mean advantage, but in many instances prevents harm; for even by a manipulation which is not regarded as rough, mischief of a serious nature not infrequently follows, and if so, need it be a matter of surprise that greater mischief supervenes upon roughness? Remember that the sense of touch in surgical work is of such great importance as to require the fullest education; consequently, take advantage of every opportunity which offers to improve its powers, but do so with gentleness. I would next venture to emphasise the value of diagnosis in every case of disease or injury, although I feel convinced that the senior students before me have already been led to understand the absolute necessity of every practitioner of medicine or surgery acting upon this principle before he begins the treatment of any case.

If, from circumstances and the want of facts, the diagnosis must be uncertain, at any rate, make a provisional, or what I like to call a "working diagnosis," in order that your treatment may be laid down upon a principle and systematically followed, until by the formation of a more exact diagnosis, some change is called for. Without the formation of a working diagnosis in every case it is clear that the practice of medicine must be unscientific and uncertain; with it confidence is experienced both by the physician and his patient. I cannot, therefore, too strongly urge the value of this scientific principle of practice upon your attention. Let it be the leading principle of your professional life now and in the future, for so soon as you cease to act upon it you descend from the secure position of a scientific practitioner to the level of the uneducated and the quack, who, having no scientific attainments, no knowledge of the working of the machinery of life, either in health or disease, leads the public by his methods to believe that the art of medicine consists only in the use or administration of drugs and local applications presented for the treatment of prominent symptoms. It is, I fear, from a want of appreciation of the value of this principle of practice in the past that there has been, and still is, in the minds of the less educated classes of society some confusion of ideas as to the differences between an educated professional man and all uneducated practitioners, whether called unqualified assistant, prescribing chemist, a medical tradesman, or a quack, for where this principle of practice is not made clear to the public mind the practice of medicine seems to the uneducated observer to be but a system of drug-giving or mere treatment of symptoms, quite regardless of the pathological conditions upon which these symptoms depend; and, under these circumstances, can it therefore be a subject of surprise that unqualified men are now found to rub shoulders against and compete with qualified men, much to the latter's detriment and the serious injury of the public?

We look to you, gentlemen, to carry this principle of practice into your daily lives, and so to demonstrate to all classes of society in your separate circles the difference between an educated medical man and all unqualified practitioners. But with this principle of professional practice you must likewise carry into daily life other principles no less important. Remember that you, as a healer of the sick, are always to act in the true professional spirit for the public good, and to treat each patient, whether private, hospital, club, or parish, with equal consideration. That under all circumstances and in the same spirit you are to employ every necessary means of investigation which may be available to enable you to form at least a "working diagnosis" of every case. That in your anxiety to get on, in whatever position in which by circumstances you have been placed, rest satisfied that you can only rise yourself by raising the profession of your adoption, and *not* by degrading it or by following any by-path. And, lastly, as I feel sure that you all are willing to accept the position which the thoughtful and observant Duke of Devonshire has so recently described as the one which the medical profession now holds in society, so I trust that you are prepared to realise to the full your individual responsibilities as one of its members.

"To the medical profession only," said the noble Duke, "could the public look, not only for the cure of disease, but also for protection against disease." He pointed out the peculiar social position occupied by the medical profession, which brought its members into more intimate relation with all classes of the community, and gave them the power and the opportunity of binding together the different classes of society. He showed how important it was that a class which occupied this peculiar and exceptional position in society should not only be as highly trained as possible in the practice and science of their own profession, but also that they should be men of wide sympathy, of liberal education, and, above all, of the highest character. It is to this position that I have assumed it is your aim to attain, and it is to help you to attain to it that I have made the few remarks to which you have so attentively listened. The ultimate issue is in your own hands, but let me add that it cannot be doubtful if you, now in your student period of life, recognise, as I trust you do, the qualifications necessary for the fulfilment of its many-sided requirements, if you cultivate your individual talents in the ways which have been pointed out, if you take full advantage of the splendid opportunities you enjoy of gaining a sound knowledge of your profession in this University College, and if you do all this under a strong feeling of personal responsibility, governed by the highest sense of duty.

MEDICAL MAGISTRATES.—It is satisfactory to note that of six magistrates recently appointed for the borough of Cambridge two are members of the medical profession—Mr. T. Hyde Hills, who is also mayor of the borough and president of the Cambridge Medical Society, and Dr. Alexander Hill, the well-known Master of Downing College.

ON THE PULSUS BISFERIENS OF AORTIC REGURGITATION.[1]

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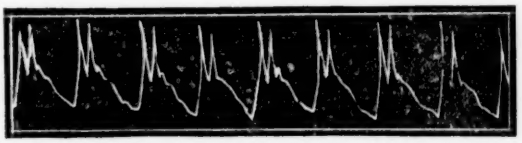
SHORTLY after reading the very instructive and interesting papers of Dr. Graham Steell on this subject,[2] and to which I here express my indebtedness, a well-marked example of the somewhat rare type of this pulse described by him came under my own observation. This variety of pulse is generally described as a form produced by aortic stenosis, but occurring much more rarely than the more usual modification of the pulse found in this lesion—namely, the anacrotic pulse. Dr. Steell defines the pulsus bisferiens as follows: "Both percussion and tidal waves are well represented, but the latter, instead of being rounded and sustained, forms a sharp angle. Moreover, the second wave begins low and the two waves reach the same level, or nearly so. The dicrotic wave follows and its degree of development varies." He states that the object of his "communication is to raise doubt as to the true nature of the pulsus bisferiens being necessarily associated with aortic stenosis." In his case the peculiar pulse was present in the left radial only; there was a double aortic murmur with systolic thrill. In a subsequent communication[3] he gives the results of the necropsy. Mitral stenosis was present, and the left ventricle was greatly dilated and somewhat hypertrophied. The aortic cusps were extensively diseased, but from the nature of the lesions Dr. Steell concludes that "there would not be a very extreme degree of obstruction to the blood passing from the ventricle into the aorta." No explanation of the pulsus bisferiens being unilateral was discovered. The circumference of the aortic orifice was one inch and three-quarters. I will now relate my own case, which was under observation at different periods during several years, in which the pulsus bisferiens was present at one period of the case in great perfection and imperfectly at another, and in which the post-mortem examination showed the presence of free regurgitation, but no obstruction at the aortic valve.

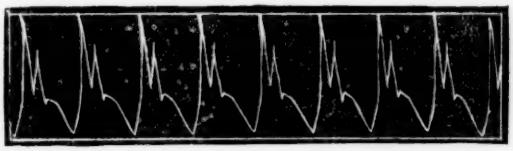
A man twenty-one years of age came under observation as an out-patient at the General Hospital, Bristol, on Jan. 1st, 1889, complaining of shortness of breath and palpitation. He had had syphilis eighteen months previously, but never rheumatism or rheumatic fever. He worked at a manufactory, and his employment involved exposure to great heat from boilers and severe muscular exertion in shifting casks weighing from 16 to 17 cwt. There was no suspicion of lead poisoning, and the illness had come on gradually without assignable cause. There was capillary pulsation and also much pulsation of the arteries. The apex beat of the heart was felt in the sixth space one inch outside the nipple. The area of dulness began at the third rib above, and extended from midsternum to outside the nipple line. A long blowing, diastolic, aortic murmur was preceded by a fainter systolic one. Both were heard all over the cardiac area, but loudest at the base, and the former was conducted down the sternum, and also to the apex. The pulse was 84, tense during the wave, and water-hammer in character. A sphygmographic tracing showed a well-marked rise due to the tidal wave and a distinct dicrotic wave; after the administration of ten minims of tincture of digitalis three times a day for two weeks, showed tracing of pulsus bisferiens, but with tidal wave not rising very high. I did not see him again until Oct. 13th, 1893, when he was admitted into the hospital with a history of cardiac symptoms for twelve months previously; he had managed to do his work, however, until a week before admission. He was a very temperate man as regards alcohol, but drank tea four times a day. He was anæmic, but well nourished. There was pulsation in the arteries of the neck and in the upper and lower extremities, and a thrill was to be felt in the subclavian and innominate arteries. Capillary pulsation was noted. The apex beat of the heart was heard in the sixth space half an inch external to the nipple; the maximum impulse was heard in the fifth space internal to the nipple. The area of dulness began above at the third rib, and transversely extended from the right border of the sternum to a point nearly one inch to the left beyond the position of the maximum impulse. A long, soft diastolic murmur in the aortic area entirely replaced the aortic second sound, and was conducted upwards but more distinctly downwards along the left border of the sternum, and was audible at the apex. The first sound at the apex was indistinct, and sometimes during his stay in hospital a systolic murmur appeared there. No systolic murmur was heard at the base. The pulmonary second sound was feeble. There was a little dulness at the base of the left lung, and the liver and spleen were both enlarged. There was no dropsy and the urine did not contain albumen. A cardiographic tracing at this time, taken over the seat of the maximum ventricular impulse, showed delay in the pulse wave (only an indication and not a good tracing of the brachial pulse was obtained); in the ventricular curve the rise due to the auricle was well marked, and a second notch near the top of the ascending line occurs, probably due to commencing contraction of the papillary muscles; both rise and fall are rapid and the line of the diastolic period varies, sometimes ascending rapidly and at other times being straight. On Nov. 7th, by which time he had much improved and was able to be up, the pulse was felt by the finger to give a double shock. Fig. 1 shows well the peculiar characters of the pulsus bisferiens; the dicrotic wave is plainly marked, following the tidal wave. On Nov. 14th the tracing still

FIG. 1.



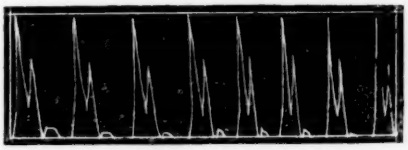
shows the double beat, but the percussion wave is now much greater than the tidal; the dicrotic wave is well marked and the pulse fairly full between the beats. (Fig. 2.) On Nov. 21st

FIG. 2.



the pulse showed more decided evidence of regurgitation, the artery being very empty between the beats, the rise of the lever during the percussion wave is higher than in previous tracings and the tidal wave smaller, both, however, being still separated by a distinct notch. (Fig. 3.) There was a distinct

FIG. 3.



interval between the carotid and radial pulses. The temperature was, as a rule, normal, but reached from 99·5° to 99·8° F. on a few occasions. He went out shortly afterwards, but was readmitted on March 16th, 1894. The pulsation in the vessels was now more marked than before. The apex beat of the heart was felt in the sixth space outside the nipple; dulness extended above to the second rib, as far out as the right border of the sternum at this level, and at the fourth rib from one inch beyond the right sternal border to half an inch beyond the nipple line to the left. There was some deep seated pulsation

[1] A paper read before the Bristol Medico-Chirurgical Society on Nov. 14th, 1894.

[2] Medical Chronicle, vol. xvii., pp. 229 and 313

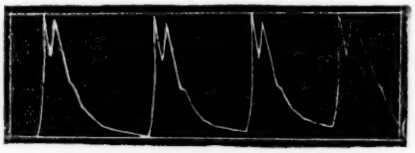
[3] Loc. cit., p. 313.

to the right border of the sternum in the second and third intercostal spaces (dilatation of aorta). Loud diastolic aortic and fainter systolic mitral murmurs were heard. The pulse-rate was 72. The sphygmograph showed the pulse of aortic regurgitation with notch of tidal wave plainly marked on down stroke and the dicrotic wave absent, no sign of pulsus bisferiens being present. The tracing taken from the carotid arteries with cardiograph (recording tambours and drum of Rothe's polygraph) showed a distinct notch about half way up the ascending line of trace. According to Landois and Stirling[4] in well-marked aortic insufficiency an anacrotic pulse wave occurs in the large vessels from the contraction of the auricle causing in the blood a wave which is at once propagated through the open mouth of the aorta into the large bloodvessels and is soon lost in the peripheral vessels. This I take to be the explanation of this notch in the carotid trace. After a short stay in the hospital he was relieved by rest and treatment and went to a convalescent home. He was admitted again very ill on Oct. 16th and died on the 22nd. He was too ill during this period to be disturbed by taking fresh tracings—in fact, he appeared to be dying on admission, but rallied a little for two days, then gradually sank, and died. The aortic diastolic murmur was extremely loud, with a marked systolic murmur at the apex, but none at the base. The arteries pulsated to an extraordinary degree, and on placing the chest-piece of the stethoscope over the bronchial or radial arteries a loud knock was produced by the pulse wave.

At the necropsy the lungs showed brown induration. Infarcts were found in the left lung and in the spleen. The pericardium was normal and contained no fluid. The heart was very large, extending upwards above the first rib, to the right nearly to the nipple line, and to the left to two inches beyond the nipple line. All the cavities were full of dark clot. It weighed, free from blood, thirty ounces. The right ventricle was dilated. The tricuspid valve admitted five fingers. The pulmonary arteries were competent, the segments of both being normal. The left ventricle was very large, dilatation being in excess of hypertrophy. The aortic valve was altogether incompetent, measuring three and a quarter inches in circumference (or 81 mm., 71 mm. being the normal according to Landois and Stirling). The valve segments were covered by masses of mostly fine, but in one or two places large, granulations. These extended freely from the margin and the ventricular surface of the cusps for a length of a quarter of an inch, in one part half an inch, into the blood stream. One cusp was almost entirely destroyed, being replaced by granulations, and the others were very much damaged; the sinuses of Valsalva were somewhat dilated, and the valve segments were pressed back against them, so that so far as could be ascertained they offered no resistance to the flow of blood. At one spot fine sago-grain-like granulations spread upwards on the aorta for a distance of half an inch, and downwards they extended to cover the ventricular surface of the anterior segment of the mitral valve, this flap and its chordæ tendineæ being thickly covered with them; the latter had only in two instances ruptured, although the granulations had run along them as far as the musculi papillares. On the auricular surface of this anterior valve segment there were two rounded aneurysmal swellings with hard calcified walls. They opened freely into the ventricle, being formed by the giving way of diseased portions of the valve. One of them had also a pinhole aperture into the auricle. The other mitral segment was also covered, though to a less extent, with fine granulations, especially abundant on its free margin. The mitral valve admitted five fingers. The aorta itself was only slightly dilated, and with the coronary arteries appeared normal.

The first point to notice is the appearance of the type of pulse of the pulsus bisferiens, imperfectly developed, however, after the administration of digitalis in January, 1889. I may say here that no digitalis had been given when this pulse in its perfect form was found in November, 1893, and that none of the other patients mentioned below had taken digitalis. All the tracings were taken at the same pressure of 3 oz. Next, in Tracings 1 and 2, in which this type of pulse is shown, the pulse is fuller between the beats—i.e., the pulse wave is better and longer sustained, the rate is slower, 72 and 76 to the minute respectively, as compared with Tracing 6 in which it was 90 to 84. As the pulsus bisferiens becomes less marked (Figs. 1, 2 and 3) it is the tidal wave which becomes weaker, while the percussion wave becomes more sudden (straighter upstroke) and higher. Further, cardiograms showed that there was delay in the transmission of the pulse wave. With regard to the question of the occurrence of the pulsus bisferiens in aortic stenosis or in regurgitation, I have given three tracings from other cases, in which there were, however, no post-mortem examinations. Fig. 4 was from a man aged seventy-five years, with enlarged

FIG. 4.



heart; the apex-beat was present in the sixth space, two inches outside the nipple; there were faint systolic, and long, loud blowing diastolic murmurs at the right base, conducted in the usual directions. There were capillary pulsation and marked throbbing of the arteries; the pulse was of a water-hammer character. The arteries were degenerated. A similar tracing was obtained from a man aged forty years. There was no history of rheumatic fever. The apex beat was heard in the fifth space outside the nipple, heaving in character; there was a soft blowing diastolic murmur at the second right costal cartilage conducted down the left border of the sternum and audible at the apex. The pulse was collapsing, 48 to the minute. No. 11 was from a man aged sixty years, with marked pulsation in the arteries. The pulse was strong, but collapsing. The apex beat was heard in the sixth space, one inch outside the nipple. Closure of the aortic valves could be plainly felt, and the second sound, loud and ringing, was followed by a faint whiffing diastolic murmur. The urine contained a trace of albumen. The arteries were somewhat degenerated. Though there was a systolic murmur in the case from which Fig. 4 was taken, the clinical signs pointed to predominance of regurgitation, and in the other two cases there was no clinical evidence of aortic stenosis. These cases presented fair examples of the pulse under discussion. A marked tidal wave, with acute, not rounded summit, is often met with in tracings from aortic regurgitation. So far as clinical evidence is to be relied on, and I do not wish to lay too much stress on clinical signs unconfirmed by post-mortem examination in cases of this kind, they are in favour of the occurrence of this type of pulse in aortic regurgitation without at any rate marked stenosis. I think, however, that my first case affords conclusive evidence that the pulsus bisferiens may occur in simple aortic regurgitation.

In Dr. Steell's case the pulsus bisferiens was, curiously enough, only present in the left radial. There was no marked difference between the pulses on the two sides in my first case. I venture to suggest that the pulsus bisferiens of the type here described may be produced in deficiency of the aortic valves when the amount of regurgitation is not extremely great and the arterial tension is fairly well maintained, while at the same time the left ventricle is hypertrophied, and there is that delay in the transmission of the pulse wave which is often found in this disease. The percussion wave of the sphygmographic tracing is generally held, after the view of Mahomed, to be produced by the shock of the ventricular contraction, to be due to the inertia of the lever, and to be roughly a measure of the suddenness of the ventricular contraction. In the pulsus bisferiens of this type there is a great rise of the lever, due to the sudden contraction of the powerfully acting ventricle. Then, owing to the delay in the pulse wave, the lever has time to drop some distance. It is now raised by the pulse, or the tidal, wave, this again giving a high rise to the lever, but the angle traced out is an acute one, partly because the ventricular contraction is sharp and sudden, partly because regurgitation takes place. According to the amount of regurgitation the fall of the lever will be nearly to the base line, or if, as is the case in some of the above tracings, the regurgitation is not very considerable, it will take place more gradually. It should be noted that in the above case the pulsus bisferiens appeared the first time when the action of the heart had been improved by digitalis, and the second time when the patient had been for three weeks at rest in bed under

[4] Text-book of Human Physiology, vol. i., second edition, p. 159.

treatment in the hospital; in other words, it appeared when the physical signs and symptoms indicated improvement in the action of the heart and a lessened amount of regurgitation. When he came in the third time with the heart more dilated and all the symptoms and physical signs worse, the trace showed, not the pulsus bisferiens, but an ordinary one of aortic regurgitation. Further, in this case the peculiar pulse disappeared by the percussion wave becoming more marked, the tidal wave less so, and the artery more empty between the beats. It seems to me that the above type of pulsus bisferiens is of a totally different nature from that other one described as met with in aortic stenosis. I have given an example of this latter in Fig. 5, and the

FIG. 5.

same pulse is figured by Sir W. Broadbent in his description of the pulsus bisferiens.[5] Sir W. Broadbent associates this pulse with aortic stenosis, and attributes its second beat to "a reinforcement of a prolonged systole near its close." It is easy to see that such a pulse may easily be transformed into an anacrotic one; some of the beats in Fig. 5 and those in the upper of the two tracings given by Sir W. Broadbent are practically anacrotic beats. They are both found to occur in aortic stenosis, and the mechanism of production of this second form of the pulsus bisferiens given by Sir W. Broadbent corresponds with that held for the production of the anacrotic pulse—namely, that it is due to the prolonged effort of the left ventricle against obstruction. Hence I submit that two distinct varieties of the pulsus bisferiens must be recognised: (1) occurring in aortic regurgitation of the kind I have first described; (2) occurring in aortic stenosis, merely a modification of the anacrotic pulse. Dr. Graham Steell suggests that transition pulses between the pulsus bisferiens and the anacrotic exist. There is no difficulty in acknowledging their existence in the second variety of pulsus bisferiens. Of the first variety he says that "starting with a common type of simple aortic regurgitation sphygmogram, in which the tidal wave, while of considerable elevation, does not reach the level of the percussion wave and is unsustained and irregular. A probable result of narrowing of the aortic orifice might be interference with the percussion wave so that it became level with the tidal wave (pulsus bisferiens)"; and he suggests that in a still further degree, and with progression of the narrowing, the curve would be rendered anacrotic, the anacrotic is the expression of a great, the pulsus bisferiens of a minor, degree of obstruction. If the explanation of the first variety of the pulsus bisferiens that I have advanced above is correct, we should, on the contrary, expect that as the regurgitation increased and the arterial pressure fell the tidal wave would grow less and less marked and the pulse tracing become one of ordinary aortic insufficiency type. This happened in the fatal case I have described above, and would be the ordinary course of events in aortic insufficiency. In a case of mixed aortic obstruction and insufficiency the existence of the first variety of pulsus bisferiens would show the preponderance of regurgitation over obstruction, and that of the second variety the reverse. The appearance late in the case of the second type of pulsus bisferiens passing on into the anacrotic pulse would indicate increasing aortic obstruction. It might possibly happen that a disease of the aortic valves which at first allowed free regurgitation might in the further course of its development cause rather obstruction than permit regurgitation, and a pulsus bisferiens of the first type pass through the second type into the anacrotic pulse. Clinical experience would lead one to believe, however, that such a course of events in aortic disease is infinitely rare, if it ever occurs, and in such a case the mechanism of the production of the second type of the pulsus bisferiens and then the anacrotic pulse would be the same as in the ordinary cases of simple aortic stenosis, and not be, strictly speaking, a modification of the first type, but rather an entire change in the conditions present. This case may, therefore, practically be left out of consideration.

Since writing the above I have read Dr. Graham Steell's paper,[6] in which he comes to the conclusion that his cases "seem to show that neither the anacrotic nor pulsus bisferiens possesses pathognomonic value as a sign of aortic stenosis."

Clifton, Bristol.

[5] The Pulse, p. 201, Fig. 47. Cassell and Co., 1890.

ON AN AVOIDABLE ERROR IN SPHYGMOGRAPHY.

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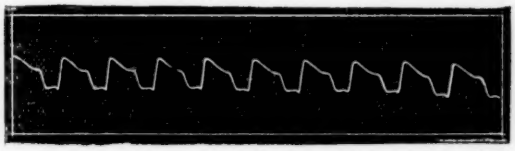
I HAVE read with pleasure and instruction Dr. Graham Steell's article on the Pulse in Aortic Stenosis.[1] Those who know the careful character of Dr. Steell's work in this department of medicine will not lightly criticise it. It is upon the latter portion of his article that I wish shortly to comment. He remarks that a very striking feature of the pulse in two cases of double aortic disease which he relates was that there was an "inequality of the development of the peculiar characters on the two sides." He states also that after careful clinical and pathological examination of the arteries no explanation of this phenomenon was forthcoming. While I am not in a position to state that the explanation I am about to suggest applies to his cases, I am disposed to think that it is not unworthy of consideration. I the more readily make it in a spirit which I trust will not be misunderstood—namely, as one desirous of seeing the greatly extended use of the graphic method in the investigation of clinical problems affecting the circulation. I can most conveniently do so by relating a recent experience. On Nov. 29th, 1894, I had an opportunity of seeing, with Dr. Cecil Morgan, a young woman twenty-one years of age, who had suffered from rheumatic fever and was the subject of aortic valvular obstruction and regurgitation, with much the same physical signs as those related by Dr. Steell in the cases in question. I took a sphygmogram of both radial pulses. Fig. 1 is that of the right and Figs. 2 and 3 are those of the left radial artery. The

FIG. 1.



Sphygmogram of right radial artery, somewhat tense. Nov. 29th.

patient was in bed, on her back, and close to the edge of the bed. As she was in a very weak state, not wishing to disturb her more than possible, I took the sphygmograms as she lay, with the right forearm projecting somewhat outside the bed

FIG 2.

Sphygmogram of left radial artery, unstretched. Nov. 29th.

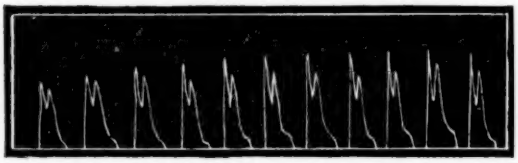
and supported by Dr. Morgan. In this position there was some tension of the brachial structures generally. The instrument was used on the left arm, while it was completely

[6] THE LANCET, Nov. 24th, 1894.

[1] THE LANCET, Nov. 24th, 1894.

supported by the bed and was in a position of perfect rest. Figs. 2 and 3 were taken one after another with the arm in the same position, the latter being taken first and before the instrument had been regulated to the precision depicted in Fig. 2. On afterwards examining the differences between Figs. 1 and 2 it occurred to me that they were due to

FIG. 3.



Sphygmogram of left radial artery, resembling in portions the tracing of pulsus tisfericus. Nov. 28th.

some artificial tension in the right radial artery arising from the position of the arm at the time the tracing was taken. I had an opportunity of proving the correctness of this surmise on Dec. 1st, when I again had an opportunity of seeing the patient through the kindness of Dr. Morgan. On this occasion I had the patient moved further into the bed, and supported the right arm in an easy position on a soft pillow. The resulting sphygmogram (Fig. 4), it will be

FIG. 4.

Sphygmogram of right radial artery, unstretched. Dec. 1st.

seen, exactly resembles Fig. 2 taken on the former occasion from the left radial. The conclusion to be drawn from this experience, and one well known to those in the habit of using the sphygmograph, is that a very little increased tension in an artery, even although excusably overlooked, may alter the character of a tracing. Whether this was so in Dr. Steell's cases I do not presume to say, but that it is a source of fallacy which cannot be too carefully guarded against I am convinced. Dr. Ewart, in his recent work on Tactile Sphygmology, indeed, accounts for the differences between the sphygmograms of the raised and lowered artery on this hypothesis. In the latter instances, however, I do not think the influence of gravitation can be altogether excluded. Sir William Broadbent, who speaks of the sphygmograph as having been of immense service to himself, has come to the conclusion that the variety of readings exhibited by that instrument render it not specially useful in practice. In support of this opinion he gives four pages of sphygmograms in his book on the Pulse taken from different sources. Of some of these he remarks that, "unless it were so stated, it would be difficult to believe that the latter were all taken from the same form of disease" (p. 34). In these cases, however, notwithstanding the respected names which are responsible for them, it is quite evident, from an examination of the tracings, that the differences are less attributable to the instrument than to the person using it. It is as possible to "foozle" in sphygmography as in golf; yet, as an authority on that noble game remarks, there is some evidence to suppose that the erring ball has, after all, followed a dynamic law in its inconvenient flight. So also the puzzling sphygmogram is in many cases due to the non-elimination of avoidable sources of fallacy. It is with the intention of emphasising one of these that I write this, firmly believing that there is a characteristic and standard tracing for various forms of circulatory disturbance as reliable in itself as any other sign.

Upper Berkeley-street, W.

THE RESULTS OF RADICAL OPERATION FOR MALIGNANT DISEASE OF THE LARYNX, FROM THE EXPERIENCES OF PRIVATE PRACTICE.[1]

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(Concluded from page 1478.)

HAVING so far described my experiences gained in my private practice with regard to the radical treatment of malignant disease of the larynx, it only remains for me to describe the operation as now performed by me, the very important question of its after-treatment, and to discuss the general lessons which I have derived from my experiences.

6. *The operation.*—Radical operation having been decided upon in a case which from its laryngoscopic examination justifies the hope that thyrotomy, with removal of soft parts and, possibly, with resection of some portion of the cartilages, will be sufficient, I proceed as follows: Tracheotomy is first performed, and a Hahn's aseptic[2] compressed sponge cannula is introduced into the trachea. Fully ten minutes should now be allowed to elapse before the larynx is opened, in order to give the sponge full time to expand and to hermetically occlude the lower air passages, so as to prevent the entry of blood when subsequently the larynx is opened and the operation in its interior performed. Undue hurry in proceeding with the actual operation immediately after the performance of tracheotomy, whereby after the opening of the larynx blood may be allowed to enter into the lower air passages, has had a good deal to do, I feel sure, with the pulmonary and bronchial complications so often encountered in this class of operations. The ten minutes having elapsed and the front part of the thyroid cartilage meanwhile having been laid bare throughout its entire length by means of scalpel and raspatory, it is opened exactly in the middle line, bone forceps being usually necessary for this purpose, as the cartilage is almost always found ossified in patients of such an age as are those in whom these operations are performed. On account of this ossification very frequently the inspection of the interior of the larynx and the handling of instruments in it is a matter of extreme difficulty; the sides ought to be held apart either by two broad retractors or, better still, by two strands of strong silk passed through the anterior parts of the lateral wings of the thyroid cartilage after it has been split open. Undue violence, of course, in holding the two halves apart ought to be strictly avoided. At this stage of the operation it will generally become necessary to protect the field of operation against mucus and saliva, which are often secreted in excessive quantities from the mouth and pharynx, by plugging the lower part of the pharynx by means of a comparatively large aseptic sponge secured by a long string and introduced through the laryngeal wound into the lower part of the pharynx, which it ought to fill up as completely as

[1] In the previous issue of THE LANCET, published on Dec. 22nd, an error was committed which, though slight, may cause confusion in statistics if remaining uncorrected. In the "analysis of causes of death," page 1475, one case has by inadvertence been counted twice over; hence in column 1 of that page, on line 5 from below, the text ought to read "in the *three* remaining [not 'four'] cases," whilst in column 2, on line 39 from above, the word "six," and on lines 41 and 42 the words "general sepsis (?) one case," ought to be omitted, the case thus referred to being identical with the one "fully unexplained" mentioned in the next line.

[2] It is with good reason that I insist that the surgeon should be quite certain of the sponge having been really rendered aseptic before being attached to the tube and that this important point should not be left to the instrument maker only. In two cases, one occurring in my own practice and the other one in that of a friend of mine, I am by no means sure that the doubtfully aseptic character of the sponge had not something to do with the fatal issue. At that time I left, following Hahn's instructions, the sponge tube *in situ* for twenty-four hours, and when I removed it in the case just alluded to it smelt horribly.—I ought also to mention here that my friend, Mr. Tyrrell, who, with the exception of the one unfortunate case in which death occurred from rectal administration of ether, has given chloroform in all my cases, objects to a contrivance used by Professor Hahn. This is a long flexible tube, the one end of which can be attached hermetically to the tracheotomy tube, whilst its other end is connected with a funnel, covered with cloth or flannel, on which the anæsthetic is poured. He fears, very rightly, no doubt, that if the patient breathes at all irregularly a large amount of chloroform vapour may accumulate in this long contrivance, and the patient's lungs, on making a deep inspiration, may all at once become saturated with too much chloroform. This point would seem deserving of special consideration.

possible. The operator will also do well to be provided with a frontal reflector, to be attached to his forehead, and with a good source of light, in order to illuminate the interior of the larynx well before and during the removal of the growth. A little Trouvé's electric lamp will be found very useful for the purpose. Finally, before commencing the removal of the new growth the whole side of the larynx to be operated upon should be twice mopped out with a 5 per cent. cocaine solution by means of a soft camel-hair brush at intervals of a minute or two, in order to contract the capillaries on that side and to prevent parenchymatous bleeding which otherwise is sure to greatly interfere with, and to unduly prolong, the removal of the growth proper, whilst at the same time it may allow suspicious portions to remain behind. I can hardly insist strongly enough on the importance of the two last-named measures—viz., the necessity of good illumination of the parts and the desirability of producing artificial ischæmia before beginning with the removal proper. In an operation in which on the one hand it is so absolutely necessary not to leave any fragments of the growth behind, and on the other hand not to sacrifice more of the important structures one has to deal with than is absolutely required, everything that facilitates the achievement of this purpose cannot be too carefully attended to. The field of operation having thus been prepared, the operator ought to make two semicircular or elliptic cuts, uniting in front and behind through the whole of the soft tissues and down to the perichondrium, round the diseased area, and of course not too close to it—i.e., at a distance of about half to one inch from the periphery of the growth—so as to be certain that he actually operates in the healthy neighbourhood and leaves no part of the tumour itself behind. Desirable as it is not to take more away from the voice-producing parts than is really necessary, no undue sentimentality in that respect ought to interfere with the thoroughness of the operation—life and absence of recurrence first, voice afterwards! In this connexion I may also at once state that the operator in these cases must be prepared to find the disease considerably more extensive than had seemed from mere laryngoscopic examination, and that the operation may assume whilst in the course of progress a much larger scope than was originally intended. I shall return to this most important subject at the conclusion of this paper.

The area to be removed having thus been circumscribed, the removal ought to take place by the growth itself being held with dressing forceps and the whole area being cut out with curved scissors, the points of which are firmly pressed against the inner aspect of the cartilage the mucous covering of which is to be removed. Unfortunately it will be found that it is hardly ever possible to remove the whole of the growth in one piece, and as a rule the diseased portions will have to be removed piecemeal. It is during this act that the advantage of first contracting the capillaries by means of the cocaine solution becomes obvious. The entire growth and a part of its healthy neighbourhood—if necessary, including portions of cartilage—having thus been removed, the base ought to be firmly scraped with a sharp spoon. In very rare cases only will it be found necessary to apply the galvano-cautery in conclusion. Every source of bleeding having finally been carefully stopped, and even small bleeding vessels ligatured, the whole of the interior of the wound is dusted with the deodorised iodoform, or with iodoform and boracic acid mixed in equal parts, and the sponge cannula immediately removed. The whole of the wound is then covered with cyanide gauze. The immediate removal of the tube is an innovation in the technique of the operation for which, as well as for valuable simplifications in the after-treatment, we are indebted to Mr. Butlin. It renders the patient's existence during the first twenty-four hours after the operation much more comfortable, and removes at the same time, as already stated, a source of possible septic danger. I frankly confess that I adopted it with much fear and trepidation, considering the danger of a secondary hæmorrhage, but I have not found my fears realised since the alteration of my former method. In cases in which from the very beginning more or less extensive resection of the thyroid cartilage, or even extirpation of one half of the larynx, is to be anticipated the parts of cartilage to be removed ought to be freed from their perichondrium and from the surrounding soft parts by means of an elevator. In other respects the operation is the same only more extensive than mere thyrotomy with removal of soft parts. It will not be found necessary in most cases to prophylactically ligature one or several of the laryngeal arteries.—Finally, in cases in which the malignant disease either affects the epiglottis or the aryteno-epiglottidean fold subhyoid pharyngotomy (after the preliminary tracheotomy and insertion of Hahn's tube) appears to be the most useful method of operation, as by it access is in the simplest way given to the diseased parts. The incision ought to be made horizontally and parallel to the lower border of the hyoid bone, across the neck to an extent of about six centimetres. The operator then dissects carefully downwards, and after exposure of the thyro-hyoid membrane divides this, during which act he must be careful not to cut across the epiglottis close to its base, as this part is not always separated from the ligament by the usual layer of connective tissue, but may be adherent to it. The whole pharynx is thus well exposed to view. The larynx having been pulled forward to some extent out of the wound, the growth can now be freely removed with curved scissors or the knife, the operator of course always proceeding in the healthy tissue in its neighbourhood. After free removal ligatures are to be applied to all the vessels, the wound is to be disinfected in the manner above described, and the pharynx is to be stitched off from the external wound by means of horsehair ligatures; whilst in this class of cases the external wound also may be closed immediately by similar ligatures, fine strands of silk being inserted across to serve the purposes of drainage. As in the case of thyrotomy, the wound is then to be covered with cyanide gauze, and a bandage may be applied.

7. *After-treatment.*—The after-treatment of cases of radical operation for malignant disease of the larynx up to a recent period was very troublesome for both the patient and the operator. Following Hahn's instruction, the sponge cannula was formerly removed twenty-four hours after the operation only, and an ordinary tracheotomy tube covered with india-rubber introduced in its stead, which was left *in situ* for several days up to one week. The interior of the larynx at the same time was plugged twice daily, and from the fifth or sixth day once daily, with iodoform gauze. During the first three or four days feeding was effected by means of a soft œsophageal feeding-tube, and all these various methods did not contribute to the patient's comfort. Particularly the plugging with iodoform gauze in most cases was a subject of constant and sometimes serious trouble; not only did the friction of the gauze against the sensitive posterior wall of the larynx in many cases lead to violent and incessant coughing, but often enough, however carefully the plugging might have been effected, the long gauze plug, having become saturated with secretions from the wound and from the pharynx, became detached from its original position and hung in part down into the lower air passages, where, of course, it acted completely like a foreign body and constantly irritated the parts. In one case I remember having been called to a patient in the middle of the night on account of a serious attack of suffocation, and on removing the tracheotomy tube found that its lower end was plugged by the lower end of gauze tampon, which had hung down in the trachea and during an attack of coughing had been forced into the lower end of the tube. All this I have changed in my later operations, after Mr. Butlin had at a meeting of the Laryngological Society[3] detailed his present procedure. The sponge tube having been removed at the end of the operation, and the wound having been treated in the manner above described, the patient is not propped up in bed, but placed in an almost horizontal position on his side, that side being lowermost which corresponds to the half of the larynx operated upon; one pillow only is allowed under his head. By means of this position the tendency of secretions to pass down into the lower air passages is as much as possible diminished. Instead of plugging the wound as before it is frequently dusted with iodoform and boracic acid mixed. I prefer this mixture to the use of iodoform, pure, in order to minimise the danger of any iodoform poisoning. The dusting of the wound with the disinfectant, which ought to be effected during the first few days by means of a powder blower at least twice daily, has been further facilitated by an observation made by Mr. Butlin. "Watching these patients he had found that, when they swallowed, the two sides of the wound into the larynx separated to such an extent that the nozzle of the insufflator could be easily inserted between them, and the powder blown directly on the raw surface." Mr. Butlin justly regards it as of the greatest importance that

[3] Proceedings of the Laryngological Society of London, Oct. 11th 1893, p. 28.

the iodoform should reach the actual surface of the wound, and this was difficult to effect when the powder was insufflated through the mouth. The external covering of cyanide or iodoform gauze must be as often renewed as it is wetted by secretions, and the employment of an attentive nurse is very essential for this part of the after-treatment. Finally, with regard to feeding, unless the operation be very extensive it will be found that by employing the simple form of after-treatment just recommended patients will be enabled to take their food through the mouth at a much earlier period than in former times. Mr. Butlin himself recommends nutrient enemata during the first few days, and this of course may be still necessary in many cases; it may be tried, however, on the day of the operation itself, or on the following day, whether the patient can drink some water whilst leaning with the upper part of the body well over the edge of the bed.[4] Should there be any impediment to the closure of the larynx during this act the water will, of course, directly run out of the wound, and no harm will be done; should it, however, be swallowed without difficulty, milk may immediately be tried, and if this succeeds the patient may be entirely spared the necessity of rectal feeding. In my last two cases the plan of after-treatment here sketched answered admirably; the temperature never rose above 100°. In one case the patient was able to leave his bed on the third day, and the home, in which the operation had been performed, on the twelfth day after operation. The wound gradually closes by the formation of granulations which may have to be touched by a 2 to 4 per cent. nitrate of silver solution once a day if they should become too exuberant, and after a few days strips of adhesive plaster may be applied over the upper edges of the wound so as to facilitate an approximation of the two sides. I have not yet dared to close this part of the external wound after the operation by ligatures, because I feared possible retention of secretion from the laryngeal wound and septicæmia; but I think it quite possible that with further experience this plan of treatment, together with introduction of a drainage tube into the upper part of the outer wound, may be resorted to, thereby curtailing the duration of the after-treatment and leading to the formation of a more linear cicatrix. Anyhow, the after-treatment here sketched will be found to greatly simplify the proceedings, to obviate the necessity of very frequent visits of the medical attendant, and to render the patient's existence during this time much more comfortable.

3. *Conclusions.*—If I were asked to what circumstances I myself ascribed the measure of success attained and detailed in this paper, I should answer without hesitation: to two facts—namely, (1) to the circumstance that my report refers to cases observed in my private practice only; and (2) to the careful selection of cases for operation. My principles of selection I have already detailed in a previous paragraph. With regard to the first of the two points just named it has been my experience throughout that one sees patients afflicted with malignant disease of the larynx, particularly those who suffer from the intrinsic form, at a much earlier stage of the disease in private than in hospital practice. Patients in the lower walks of life do not take nearly as much notice of the hoarseness, which in the cases most suitable for operation commonly is by far the first symptom, as do those belonging to the more favourably situated classes; and if I mentally pass in review the two great groups of malignant disease of the larynx, as represented by private practice, on the one hand, and by hospital work, on the other, I am quite sure that in comparatively few cases only in my hospital practice have I ever seen patients at such early stages of the disease as those reported from my private practice in this paper. Further, I regret having to state as my experience that, if to hospital patients, even should they come early enough, the desirability of an early operation be explained, the usual result is that they simply cease to attend the out-patient department. In private practice matters are very different. It is, of course, almost always a great shock to the patient, who comes to be cured of what he believes is a simple obstinate hoarseness, if he is informed, however gently and gradually, that matters are much more serious than he anticipated; but I can give it as the general result of my experience that, in almost all the cases I have seen, the patients, particularly when the diagnosis and the advice had been corroborated by a second independent opinion,[5] have submitted to early operation and thereby, in all probability, saved their lives.

This is the occasion for making an earnest appeal to every general practitioner to help operators to further increase the rate of success by enabling them to arrive at a diagnosis at the earliest possible date. Unfortunately, even now, as I know from frequent conversations with medical friends of mine, a firmly rooted idea exists in the minds of many members of the profession with regard to the symptoms of malignant disease of the larynx. It is thought that the disease manifests itself, above all, by pain, difficulty in swallowing and in breathing, swelling of the glands in the neighbourhood of the larynx, and considerable general cachexia. This idea, which is not even necessarily quite correct in all its details so far as the later stages of malignant disease of the larynx are concerned, is quite erroneous as regards its earlier stages—i.e., those in which radical operation has a reasonable chance of success. From the analysis of my cases as given in the paragraph dealing with the situation of the growth it will have been seen that of twenty cases of intrinsic malignant disease of the larynx in which the starting point of the affection could be made out not less than fifteen—i.e., fully three-fourths—started from the vocal cords. In all these cases the first symptom, and for a long time the only one, was hoarseness. All the other symptoms above named may and do come in, as a rule, only when the disease is already considerably advanced. Considering that it makes all the difference in the world whether one operates on a case of malignant disease of the larynx in which the affection is still limited to a vocal cord, particularly to its anterior end—such cases being by far the most favourable ones—or on a case in which it has extended, not merely to the adjacent soft parts, but to the cartilages themselves, it is the duty, I think, of every family attendant to remember that if a case occurs in his practice of a middle-aged or old patient suffering from obstinate hoarseness, without any other symptom whatever being present, he ought to be prepared for the possibility of this hoarseness being due to malignant disease and should make a laryngoscopic examination himself or see that it is instituted by a competent observer. Nothing is more sad than to see patients in the later stages of the disease, when it has extended quite beyond the reach of operation, and to learn from the history of the case that it began by long-standing hoarseness; and I sincerely trust that this paper may be a little instrumental in paving the way to earlier laryngoscopic examinations being made than even now is the general rule. It is certainly a serious fact that, out of the fifty-five cases of intrinsic disease enumerated in this paper, in 35 cases—i.e., in nearly two-thirds of the whole number—the starting-point of this disease could no longer be made out with certainty. Now, as to the early diagnosis of these cases, in some instances it is easy enough, in other cases more difficult, and in a third category extremely difficult. In cases in which part of a projecting growth can be intra-laryngeally removed with cutting forceps, and in which the characteristics of squamous-celled carcinoma are discovered, it is, of course, plain enough sailing; in others, however, it is impossible, owing to the disease presenting itself in the shape of a uniform general tumefaction or to the microscopic examination yielding either indefinite or even negative results, to arrive at an absolutely certain diagnosis. In such cases I hold it to be the duty of the operator to have the courage of his opinions, and not to throw the responsibility for delay upon the unsatisfactory evidence of the microscope. To ensure success in these cases it is most desirable that radical operation should be undertaken at a period when the disease is still of limited extent, and it has made an ever-deepening impression upon me that in the great majority of my own cases, as well as of those occurring in the practice of my friends in which I was privileged to be present as a spectator, the disease, after opening the larynx, was found to be much more extensive than had appeared from laryngoscopic examination. We cannot ascertain the condition of the entire subglottic cavity by means of the laryngoscope, or the extent of the submucous infiltration, and we see in cases in which the disease starts from the vocal cords its superficial progress in

[4] This plan of feeding, first proposed by Dr. Norris Wolfenden, I have found answer well in cases of difficulty of swallowing due to tuberculosis and malignant disease of the upper parts of the larynx, paralysis of the inter-arytenoid muscle, and in cases of operations such as the ones here described.

[5] It will have been observed in my tables that Mr. Butlin's name occurs in almost every case in the column indicating the *confrères* with whom I have seen the patients who underwent operation. I have spontaneously desired, in practically all cases in which there could be the least doubt as to diagnosis and as to the advisability of radical treatment, that the patient should take his independent opinion. Mr. Butlin has followed the same plan in his own cases.

the upward direction only.[6] In the great majority of cases one will be able to ascertain with certainty the malignant character of the affection one has to deal with before radical operation is undertaken; that, however, not even those who have had special opportunities are quite exempt from error in this respect is shown by Case 11 of my tables. But with regard to such errors I can only repeat what I said when describing that case: better a thyrotomy performed where intra-laryngeal operation possibly may have sufficed than a life lost through undue delay of radical operation. It may confidently be hoped that if the principles described in this communication be acted upon—and, no doubt, be further perfected by others—we shall succeed in saving a large proportion of sufferers who otherwise would be condemned either to lingering death or, at any rate, to operations much more severe and serious in their after-effects than those adopted by myself. If this paper should contribute towards that purpose my aim will have been fully obtained. I cannot conclude my remarks without thanking three friends of mine to whose active help and wise counsels I have been indebted throughout the course of my experiences—viz., to Mr. Shattock, who has made the histological diagnosis in almost all my cases; to Mr. Butlin, with whom I have seen by far the greater number of the cases operated upon in consultation; and to Mr. Victor Horsley, who has been kind enough to give me his invaluable help in many of the operations described in this paper.

Wimpole-street, W.

A THEORY OF ELECTRICAL VISION.[1]

BY DAWSON F. D. TURNER, M.D. EDIN. &C.,
LECTURER ON PHYSICS AT SURGEONS' HALL, EDINBURGH.

ACCORDING to the late Professor Clerk Maxwell light and radiant heat are electro-magnetic waves of the ether, and they only differ from each other as a high note differs from a low note. In order that we may be made aware of this wave-motion we must be provided with a proper detector. When the waves are short and of rapid vibration they affect the eye, and we are sensible of light; when they are somewhat longer they affect the cutaneous nerves, and we feel the sensation of heat; but if the waves be still longer we are not provided with any means of detecting them. We remain quite unconscious of them. Professor Hertz and his followers, however, have shown us how to construct detectors of these longer waves, and such detectors I desire to show to the society to-night. A tube of iron filings is a bad conductor of electricity, but if an electrical discharge take place in its neighbourhood then its molecules become so arranged that it becomes a very good conductor. Such a tube can then be used as a detector of electrical discharges; we might call it an "electrical eye." At present there is no current passing through the tube of filings, although it is in circuit with a battery. The galvanometer needle, as indicated by the spot of light, is at zero; if, however, I cause a few sparks to pass between the terminals of this induction coil—i.e., if I cause long electro-magnetic waves to be emitted—then the tube of filings will be stimulated by these waves, and the molecules will become so arranged as to allow a current to pass; this will be rendered evident to us by the movement of the spot of light. (The point was then demonstrated by experiment.) Our electrical eye sees the discharge. If, however, I tap the table the molecules of the filings again become disarranged, and the electrical current no longer passes. Mr. Branly discovered about four years ago this reaction of iron filings to an electrical discharge; I have worked a good deal at the subject since, and in a paper contributed to the Royal Scottish Society of Arts last winter I showed how such tubes could be used as electrical eyes or detectors, and also the range of their vision—viz., that they respond more readily to long waves than to short ones. It struck me at that time, and also previously when working with a somewhat similarly sensitive substance (viz., selenium), that the eye might perhaps be constructed on a similar principle, and I find that Professor Oliver Lodge has since, in a paper read before the British Association at Oxford during last summer, definitely suggested such an "electrical theory of vision." This theory is that in the eye, as he supposes—or in the brain, as I think—there is a source of electrical energy—that a current is, however, prevented from flowing by reason of certain molecules in the retina being in the condition of the unstimulated iron filings; that when light falls upon these molecules they become so arranged as to be good electrical conductors; that thus our electrical current is now set up; and that this, either directly or through the intervention of nerve impulses, gives us the sensation of light. In this connexion it is of great interest to learn—and Dr. Noel Paton was kind enough to inform me—that there is a complete circuit between the brain and the eye, because efferent nerves have lately been traced to the retina. This circuit would accordingly be made up of the brain, the efferent nerves, the retina with its sensitive molecules, the optic nerve, and the brain. Darkness may be due either to the simple non-passage of the current in consequence of the rearrangement of the retinal molecules when no light falls upon them, or to a positive sensation arising from the same cause. In some respects the action of selenium affords a better analogy; for, in the first place, it is actually sensitive to vibration of the same wave length as the eye is sensitive to—viz., light; and, in the second place, no tapping back or mechanical stimulus is needed to again render it a very bad electrical conductor: an absence of light is all that is required to get the electrical current cut off. Further, the selenium is most sensitive to exactly the same kind of light that the eye is most sensitive to—viz., to yellow light. (Experiments with coloured lights and selenium were then made in demonstration of the speaker's words.) It will be observed that the galvanometer needle is most deflected when the selenium is illuminated with yellow light.

George-square, Edinburgh.

[6] This is also the reason why, in spite of my success in the case of the patient, in which I chanced to remove the whole growth by intra-laryngeal operation, I am by no means in favour of attempts to intra-laryngeally eradicate malignant disease of the larynx.

[1] Abstract of a paper read before the Edinburgh Medico-Chirurgical Society on Dec. 5th, 1894; with experiments.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ANCOATS HOSPITAL, MANCHESTER.

SOME CASES OF ABDOMINAL SURGERY.

(Under the care of Mr. STANMORE BISHOP.)

(*Concluded from p. 1482.*)

WE continue this week the series of four cases of interesting abdominal operations performed by Mr. Stanmore Bishop. Case 3 is an example of adherent ovarian cyst which required a prolonged operation for removal on account of the firmness and extent of the adhesions and in which a drainage-tube was used; such cases are not uncommon. Case 4, a successful one of vaginal hysterectomy for cancer, enables us to draw attention to the recent debate at the Obstetrical Society of London,[1] raised by a paper by Dr. Lewers, in which he placed before the society the notes of six successful cases of this operation. The President stated that when the society last discussed this question in 1885 the mortality was then shown to be about 28 per cent. In a recent paper by Buecheler there was a table embracing nearly 800 cases by different German operators and showing an average mortality of about 10 per cent.; whilst of 159 cases operated on by the late Professor Kaltenbach the mortality was only between 3 and 4 per cent. In these cases the proportion of those going three years and upwards without recurrence was 25 per cent., and other statistics showed as large a proportion. Another speaker mentioned two cases which still survived after operation nine and five years respectively. The general tone of the debate showed great hopefulness for even greater improvement in results.

CASE 3. *Multilocular ovarian tumour; extensive adhesions; hæmorrhage into one sac, and commencing necrosis; removal;*

[1] THE LANCET, Dec. 15th, 1894.

recovery.—A woman aged fifty-six years, the mother of seven children, the youngest aged twenty-three years, was sent to the hospital with the following history. Thirty years ago her second confinement was followed by inflammation. She first felt the tumour on the left side twelve months since. At that time it moved from side to side, according to her position. She had pain with it, which was also felt in different places concurrently with such movement. The lump was noticed before the pain. The pain was sharp, shooting, and had continued ever since it was first felt, but latterly it had become more frequent. There was no history of injury. The patient was a stout, rather flabby woman, looking fully her age, and had lost most of her teeth. On May 6th, 1894, her abdomen was greatly enlarged and rather pendulous, the enlargement being forwards and downwards. Percussion gave a dull sound everywhere, even in the flanks, except just below the ribs in front. There was some tenderness all over the abdomen, especially when she lay on her back, but which was relieved when she turned on either side. The measurements were: Girth at umbilicus, 45½ in.; ensiform cartilage to umbilicus, 11½ in.; symphysis pubis to umbilicus, 9 in.; right iliac spine to umbilicus, 13¾ in.; left iliac spine to umbilicus, 14 in. The tumour was only slightly mobile. It appeared to fill the abdominal cavity so completely that there was no room for movement. The abdominal veins were dilated, especially on the left side. Fluctuation was marked. Menstruation ceased fifteen years ago, after being irregular for some eight years, since the birth of her last child. She thought that she had become much larger during the last month. The uterus was drawn up and anteverted, and moved with difficulty. The length of the cavity was normal. The os was patulous, with a double split. There was no perineum. She had suffered from bronchitis following influenza last winter. The respiratory sounds were now healthy, but she had slight dyspnœa on going upstairs. There was an absence of the second cardiac sound every third beat. The pulse also intermitted every third beat. She suffered from heartburn, and the tongue was flabby, with a white fur. On May 8th, at 11 A.M., Dr. Dixon gave the anæsthetic, and Mr. Montgomery assisted. A median incision five inches long was made. The parietal peritoneum was found to be adherent to the tumour over the whole of its anterior surfaces, but separable with fair ease. There were also isolated attachments of the omentum behind. Above and in the median region part of the omentum was widely and firmly adherent to a portion of the tumour, which was greenish in colour, and contained masses of brownish disintegrating fibrin. This omentum was tied in sections with chain ligatures of silk, and divided. The tumour was multilocular, and, besides some solid portions, contained seventeen quarts of fluid of a dark, blackish brown. The pedicle was wide, springing from the whole length of the left broad ligament. The abdomen was irrigated with warm izal solution. A drainage-tube was used. The operation lasted three-quarters of an hour. At 6 P.M. the patient had slept at intervals. She was once slightly sick. She complained much of thirst and of the restriction of fluids. The abdomen was retracted, but soft. The irregularity of the pulse disappeared after operation and had not since returned. The face was placid. The fluid withdrawn was bloody, with small clots. On May 9th (10 A.M.) the pulse was irregular again—two beats, rest, five beats, rest, alternately. There was no sign of peritonitis. She complained much of thirst. Nutrient enemata were given every three hours. At 9 P.M., as no flatus had passed, half a grain of calomel was given every hour for four hours, then every alternate hour for eight hours. The face was placid. The pulse was still irregular, but full and soft. On May 10th (noon) there was no sickness and no pain. The fluid withdrawn was still bloody, but scanty. To begin with, essence of beef and prepared food were given. There was no flatus. On May 15th the tube was removed. All had been satisfactory. Flatus had been first passed at 12 P.M. on the 10th. The catheter had been used until the morning of the 11th, when she had first passed urine naturally. The bowels had also been moved first on the 11th, after a Seidlitz powder. There had been a little sickness at 8 P.M. on the 10th but not since. The pulse was still irregular on the 15th. On the 22nd there had been no bad symptom. The wound was healed, except just at the point of exit of the drainage-tube. She ate and slept well. On the 27th the wound was healed. On June 5th she was sent to a convalescent home

CASE 4. *Uterine carcinoma; vaginal hysterectomy; recovery.*—The patient was a woman aged forty-eight years, who had been married twenty years. She had four children, of whom the youngest was born seventeen years ago. She was sent to the hospital by Dr. Quicke of Bradford, with the history that she had suffered for many years from prolapsus uteri and ulceration of the vaginal mucous membrane. There was also a lacerated cervix with eversion of the lips, which were generally eroded. Latterly she had complained of pain and hæmorrhage, and on examination he had diagnosed carcinoma. She was a short, dark woman, with "uterine" face, and looked thin and starved. On Jan. 20th, 1894, she complained of pain and discharge. Per vaginam examination showed an irregularly eroded and thickened os uteri, the anterior lip being very large and prominent. The posterior lip was adherent to the posterior vaginal wall, which was also ulcerated for a short distance. This ulceration was hard and knotty to the finger, but the vagina was quite loose from the rectum. There was no thickening of the broad ligaments or increased adhesion between the bladder and uterus. The uterus appeared to be double the normal size and was slightly retroflexed. The vagina was douched regularly twice daily with sublimate solution (1 in 2000), and the patient was to be well fed. On the 30th, Dr. Dixon anæsthetising and Mr. Montgomery assisting, the patient was placed in lithotomy position, with the hips raised on a firm cushion. The uterus was quite movable and drawn down with ease. The posterior incision was made first so as to isolate and clear the vaginal growth. This was turned up with the posterior uterine lip, and it was possible, fortunately, to do this thoroughly without opening the rectum. Douglas's pouch being opened, a sponge was passed up behind the uterus. Keeping a quarter of an inch clear of all altered tissue the mucous membrane was divided all round, and the bladder then separated. Its area of connexion was unusually deep. Assistance was found by passing the left index finger through the posterior opening over the uterus, depressing the peritoneal fold from above. The broad ligaments were tied in sections and divided. When the first (the left) was cut through it was noticed, as had several times before been seen in similar cases, that the uterus swung outwards, as upon a hinge, formed by the right ligament, and that this was very easily secured either from above or below, as might be convenient. In doing so the right tube and ovary were also pulled down. These were tied off and removed with the uterus. The sponges being removed the anterior and posterior peritoneal flaps were sewn together by fine silk. When perfectly closed the vagina was irrigated for ten minutes with hot izal solution, and then loosely packed with iodoform gauze. At 9 P.M. there was a good reaction. The temperature went up to 100·2° F. At 8 P.M. it had come down to 99·8°. The pulse was 92, soft and regular; and the respiration was 36. The abdomen was supple. She had very little pain, but the face was still haggard. The skin was warm and the lips and forehead were sweating. The patient slept in snatches of twenty minutes for two hours. On the 31st there was a slight reddish discharge. The pulse was 92 and soft in the morning, falling to 86 at 8 P.M. The respiration was 32. The temperature sank to 98° at 4 P.M. and rose to 101·8° at midnight. A catheter was passed every six hours, drawing off from three to four ounces of urine each time; it contained a little mucus. The patient passed flatus per rectum at 8 P.M. and again at 10 P.M. On Feb. 1st she was given a teaspoonful of hot water or a little brandy and soda water every hour unless asleep. She had been sick very slightly once at midnight on Jan. 30th, but not since. A Seidlitz powder was given at 4 P.M., which she vomited. This was repeated at 6 P.M. and at 11 P.M., there being no return. She then slept fairly well. The plug had been removed and replaced at 12.30 noon. The outside pad had been changed once or twice. The temperature was 100·4° at 4 A.M and 99·2° at midnight. The pulse ranged from 88 to 98 (slightly hard), and the respiration from 30 to 36. A hypodermic injection of morphia (five minims) had been required twice since the operation. The patient complained of pain in the back. The face was much the same. On Feb 2nd the plug was removed. Irrigation with izal solution twice daily was commenced. There was no discharge. The temperature was 100·4° at 4 A.M. and 98 6° at 10 P.M. The pulse ranged from 76 to 84 and the respiration from 30 to 36. The patient complained of feeling hungry. Milk and soda water, together with prepared food, &c., were commenced. On Feb. 3rd the temperature was 98° at 4 A.M., but sank to 97·2° at noon; it was 99·2° at midnight. The pulse varied from 70 to 80, and the respiration from 27 to 30. Flatus was passed through the rectum tube. The patient

slept for from two hours to two hours and a half at a time, and six hours and a quarter in all. On the 4th the temperature was 98·6° at 4 A.M., 97·4° at 8 A.M., and 99° at 8 P.M. The pulse ranged from 72 to 86 and the respiration was 30. At 5.30 P.M the patient passed urine without the catheter. The bowels also were well moved. Some essence of beef, gruel, tea and toast, prepared food, eggs, and fish were given. She passed a comfortable day. On the 5th the temperature, which had been 98·8° at 4 A.M., rose to 100·2° at midnight. The pulse varied from 70 to 80, and the respiration from 30 to 36. The patient began to look cheerful and had no pain. The abdomen was quite normal. From this time the temperature became more even, and only rose to 99° on the 8th. Irrigation was kept up twice daily. The ligatures began to come away on the sixteenth day, and on the thirtieth day the three remaining ones were removed. There was very slight discharge during the whole convalescence, but towards the end there was considerable irritation from itching, which nothing relieved, but which gradually disappeared. She was discharged cured on March 12th. She was seen again on June 27th. The vaginal vault was perfectly healthy, and the patient looked well. There had been no discharge of any kind since she left the hospital.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

The Antitoxin Treatment of Diphtheria.

THE adjourned meeting of this society was held on Dec. 21st, Mr. HULKE, President, being in the chair.

Dr. RUFFER in the course of a written communication which was read to the society, said that the serum of horse No. 1, which was at first used, was of such a strength that the injection into a guinea-pig of 0·001 c.c. of serum mixed with 1 c.c. of diphtheria toxine produced no symptoms whatever, the control animal dying in thirty-six hours. The injection of 0·0005 c.c. with the same quantity of toxine was not always efficient in preventing death, whilst 0·0001 c.c. prolonged life for some hours only. He thanked Professor Wright of Netley and Surgeon-Captain Semple, who performed these experiments for him. The serum of horse No. 2 was of such strength that 0·0001 c.c. of it or 0·00005 c.c. sometimes protected guinea-pigs inoculated with a dose of toxine which proved fatal to the control animals in thirty-six hours or less. It was thus proved experimentally that the serum of the second horse was considerably stronger than that of the first. The results were more favourable, and the joint pains and rashes attributable to the serum were less severe and occurred less often in patients treated with the serum of the second horse than those treated with the serum of the first. This suggested that the unpleasant effects were due to the serum as such, and not to the curative substance contained in it. In order to obtain the maximum quantity of curative substance in the minimum quantity of serum it had been decided by the British Institute of Preventive Medicine to send out no serum unless it were of such strength that 0·0001 c.c. effectually neutralised the minimum dose of toxine which would prove fatal to a guinea-pig weighing 500 grammes in from thirty-six to forty-eight hours. From Jan. 15th the Institute hoped to be able to supply enough serum to treat 150 cases per diem, and from Feb. 1st 250 cases per diem. No profit would be made, the cost for each case not exceeding 1*s.* 6*d.*, on the supposition that each case would require two injections, and the price would in all probability be greatly reduced shortly. There had been no illness among the horses, nor had any forcible means of restraint to be used for any of the necessary operations. He stated emphatically that neither he nor his assistant had any pecuniary interest whatever, direct or indirect, in the preparation of the serum.

Dr. WASHBOURN asked permission to correct a sentence which occurred in the paper to the effect that, according to Dr. MacCombie, of the South-Eastern Hospital, the cases admitted during the year were mild. This, he understood, did not represent this gentleman's views.

Dr. GOLDING-BIRD said the paper read at the last meeting was interesting as showing how antitoxin might prove useful for diagnostic as well as therapeutic purposes. Surgeons were interested only in the question as to how far the use of antitoxin assisted in the surgical measures which were rendered necessary by the complications of diphtheria. They could not await the information afforded by antitoxin in the presence of these complications because it admittedly took twenty-four hours to act. Albuminuria, too, was an uncertain guide as to the nature of the case, for even if present, it was by no means always indicative of diphtheritic nephritis. The authors' mortality after tracheotomy in cases of diphtheria treated by antitoxin was stated to have been three out of nine, equal to 66 per cent. of recoveries, the operation having been undertaken—this being an important point to bear in mind—not in view of possible contingencies, but because the child was actually menaced with asphyxia. This result could not, he said, be described as other than satisfactory and even brilliant. He had performed tracheotomy in some sixty cases of "croup," and could only claim about from 12 to 13 per cent. of recoveries. The difference between this proportion or the 19 per cent. which obtained among the authors' patients prior to the use of antitoxin and the six out of nine after its use was certainly striking. The remedy presumably acted through the system, and if this were the case there must be a limit to the time at which it could be usefully employed. It would be useful to know what was this limit of time; unless, indeed, they could employ it at any stage of the disease. He pointed out that suffocation was not so fatal in these cases as septic pneumonia, which was such a commonplace complication. In other words, the little patients died, not so much from want of air entrance as from want of air surface. He asked whether antitoxin had any effect in respect of this complication when already present.

Dr. DAVID NEWMAN of Glasgow said one of the great difficulties in these cases was the question of diagnosis. He recalled the case of a nurse who suffered from what was thought to be, and looked like, an ordinary sore-throat. Some days later the children in her charge developed an attack of diphtheria. He had examined such cases very minutely, both clinically and bacteriologically, without finding evidence of their diphtheritic nature. In this particular case, though cultivations from the nurse's throat yielded no diphtheria bacilli, the exudation from the children's throats, who had not been otherwise exposed to infection, revealed the presence of typical bacilli. The nurse, however, subsequently developed paralysis, which left no doubt as to the nature of her attack; yet she had no membrane or other appearances suggestive of diphtheria, nor were bacilli present in the throat secretions. The absence of bacilli, therefore, did not prove that the affection was not diphtheria, but the discovery of the bacillus was a positive proof of the nature of the affection. He agreed that the character of the bacilli themselves was a valuable indication of the nature of the attack, the larger bacilli being associated with the more virulent form, while the smaller bacilli were found in the mild cases. There had been a severe epidemic of diphtheria in Glasgow during the last two months, and he had seen a large number of the severer cases. He pointed out that the difficulty of ascertaining the exact strength of the serum employed was a drawback to its use, and he suggested that there must be some substance therein which could be separated. At present they were compelled to introduce a large quantity of serum which, from a therapeutical point of view, was useless. He had never seen the serum do any harm beyond the production of a rash within twenty-four hours following the injection. He had almost always found that the membrane separated much more rapidly after the injection than was usually the case; but he added that while using the serum he also continued the ordinary methods of treatment. The fall in temperature was sometimes as much as 3° when 104° F. or thereabouts, and less in proportion when the rise was less pronounced. The worst cases were those in which there was no elevation of temperature, and in such cases antitoxin did no good whatever. There was also an associated fall in the pulse rate and improvement in the character of the pulse. The general improvement in the patient's condition was also marked. He referred to the case of a nurse engaged in looking after patients suffering from diphtheria who at one time suffered from occasional attacks of sore-throat. After about two years these ceased, and since then she, to encourage the child to eat, would often eat out of the same dish with the same spoon without contracting the disease. The serum he employed was supplied by BEHRING.

Dr. HERBERT HAWKINS urged that in view of the many varieties of antitoxin now on the market, it was absolutely necessary for observers to state what particular serum they used. Aronson's antitoxin was a secret remedy, and differed from all the others in the smallness of the dose required. The method now employed by Dr. Klein was, he believed, the method formerly employed by Behring and discarded. He had endeavoured to produce a supply of antitoxin for himself, and he sketched a method by which, acting with Dr. Edmunds, he had found it possible to immunise a horse within a month by employing for injecting the horse agar cultivations, the virulence of which had been attenuated by age. It was impossible to compare a fluid obtained in this way with that furnished by Dr. Ruffer, 5 c.c. of it absolutely and certainly protecting a 500 gramme guinea-pig against a treble full toxic dose of unattenuated virus. His experience with that fluid at the St. Thomas's Hospital and the London Fever Hospital had fully convinced him of the value of this method of treatment. He had never seen such rapid cures as followed its use. In his first case, in a child aged five years, who had been ill five days before admission, tracheotomy was done at once. Although the membrane had been very abundant, in forty-eight hours none was to be seen. The second case, a child aged two years, likewise required tracheotomy on admission. In both these cases the tube was removed at the end of three days, which was unusually early. The third and fourth cases occurred in sisters aged eleven and eight years respectively. Both were bad cases, the fauces being blocked with membrane. Large doses of antitoxin were given, but one died four hours and the other twenty-four hours after admission. The fifth case had been ill thirty-six hours before admission, and there was a large patch on the right tonsil. On the second day, after the first injection, the left tonsil was found covered with membrane. On the third day, after the second injection, the membrane had all disappeared except a tiny patch on the right tonsil. All the cases were examined bacteriologically and the typical bacillus was found. Both the fatal cases contained streptococci and also a coccus which liquefied blood serum in three or four days. The enormous dose of the remedy required was a great drawback to its use. He had read of one case in which 150 c.c. had been injected into a child in two doses.

Dr. MACCOMBIE said he had succeeded in obtaining some serum for use at the South-Eastern Hospital about a month ago from Dr. Ruffer. The serum came from horse No. 2 He had had altogether 31 cases treated by serum, of which number 3 died. Many of these were not "completed" cases, and one more, at any rate, would probably die. During that period he admitted in all 54 cases of diphtheria, but he did not think it desirable to employ the serum in all, omitting it in some cases on account of the age of the patient and the mildness of the attack. Of the whole 54, 7 died, giving a mortality equal to 13 per cent. Nearly all the 54 were under fifteen years of age, and 23 of the 31 treated cases were. In the 31 treated cases, there were 3 deaths all under fifteen years of age. This was a lower mortality than he had seen before, but he had collected some figures to show that it was necessary to be very careful in drawing conclusions from a limited number of cases extending over a short period. During the present year the mortality among cases under fifteen years of age had been as follows:—January, 21 cases, with a mortality of 42 per cent.; February, 17 cases, with 35 per cent.; March, 16 cases with 31 per cent.; April, 24 cases with 29 per cent.; May, 23 cases with 30 per cent.; June, 32 cases with 34 per cent.; July, 70 cases with 37 per cent.; August, 43 cases with 18 per cent.; September, 57 cases with 29 8 per cent.; October, 48 cases with 25 per cent.; November, 23 cases with 25 per cent. There was thus a striking fall in the mortality after July. Had the treatment been commenced in August he would probably have attributed the fall to the use of the serum. Apart from this, however, antitoxin certainly appeared to exercise a very considerable influence on the course of the disease, especially when taken in hand early. If the treatment were commenced on the second or third day in most cases it would prevent the spread of the membrane and facilitate its disappearance. It caused diminution and subsidence of the fetor in many cases. He had not used the serum in any case that had been ill more than four days prior to admission, but he had come to the conclusion that it should be tried in all cases under fifteen years of age at whatever the period of the disease, unless the patient were actually moribund. The serum had little effect on the temperature; in some patients there was a rise after the first injection. The effect of the serum on the pulse was peculiar, and it had appeared in some cases to prolong the irregularity which characterised the pulse in this malady. He had had one case of relapse, twelve days after the first injection, in an adult. In this case typical bacilli were absent during the primary attack from material scraped from the throat. With the relapse there was renewed exudation of membrane on the fauces, and this contained diphtheria bacilli. There was a rash in 50 per cent. of the cases treated in this way, but this might be due to the fact that he employed comparatively large doses. The rash was often accompanied by a rise of temperature. In only two cases were there subsequent joint pains. Though it was early to speak in respect of the paralysis, he was satisfied that the incidence of this symptom was less than when the serum was not used.

Dr. CAIGER said that during the last three weeks he had used the serum at the South-Western Hospital, and his experience confirmed the results obtained by the authors. There could be no doubt of the great usefulness of the remedy in a certain class of cases, but the important thing was to get the cases under treatment early. He had used it in 30 of the cases admitted during the period, and had only omitted those cases which, in his opinion, were too mild to require it. All the 30 cases treated were sufficiently severe to cause anxiety about them. The disease proved fatal in 8 cases; 5 of the 8 died within twelve hours of admission and 3 within three hours, so that they were hardly fair tests. The proportion of cases calling for tracheotomy was materially diminished by the treatment. The chances of paralysis developing, especially the early and fatal form, were admitted on all sides to depend on the extent and persistence of the membrane, hence the necessity of taking the cases in hand early. The prognosis in the future would be based on the length of time the membrane had been present before the antitoxin was used. The type of disease during this period was unusually severe, the mortality at all ages being 30 per cent. It varied in corresponding series between 52 and 27 per cent., but he had never seen it for two consecutive months as low as 30 per cent. His own experience in respect of the comparative severity of cases in which the bacillus was alone or in association with streptococci &c. agreed with those of Roux, the presence of pyogenic organisms having an unfavourable influence on the prognosis, which was better when pure cultivations of diphtheria bacilli were present. This question was one calling for further investigation. The description given by Dr. Washbourn of what he called "atypical" colonies suggested colonies of streptococci and Brisson cocci, and he asked how he satisfied himself experimentally that these colonies were really of the diphtheria bacillus.

Dr. TIRARD gave the experience of Dr. Willcocks and himself at the Evelina Hospital with Behring's serum. They had had eight cases recognised clinically as diphtheria, bacteriological examination in several confirming the clinical diagnosis. Albumen was present in some amount in all, together with a fairly large amount of membrane and marked depression. Of these eight cases one died, but in this case the post-mortem examination showed erosion of the tonsillar artery, from which there had been severe hæmorrhage. Two of the other cases were very severe, one so much so that tracheotomy had to be done at once, and the patient was so bad that they hesitated whether or not to risk wasting the antitoxin on the case. Both the tracheotomy cases recovered, and the tubes were removed on the third day. In one case a transient urticarial rash followed the injection. In all they noticed improvement in the pulse, and in the general condition of the patient, together with a fall of temperature. The albumen in all cases was small in amount, and was present before the antitoxin was administered and diminished or ceased entirely before the cases left the hospital. In none so far had there been paralysis.

Dr. THOMAS EASTES (Folkestone) said he had used Aronson's antitoxin in several cases of diphtheria, and he showed the temperature charts, indicating a marked fall, which took place after the injections. He observed that as the severity of a case was often an exchangeable term for duration, it was evidently well to begin the treatment early. As the supply of the remedy was limited, he only made use of it in severe cases. The first seven cases did satisfactorily. The eighth was apparently a mild case, but it got worse, and an injection was given. The child died suddenly of heart failure a week later. Two of the other fatal cases were dying of suffocation and required tracheotomy at the time of giving

the injection. He did not think the serum really neutralised the toxines, or they would not get heart failure and paralyses developing several weeks later. Judging from fifty-four cases compiled from the journals, it seemed to him that when the treatment was undertaken within two days, in the absence of laryngeal symptoms every case should recover.

Dr. SIMS WOODHEAD divided cases into two main classes: (1) those in which the diphtheria bacillus preponderated, in which a fatal issue, if it occurred, did so early; and (2) those associated with streptococci, in which the fatal issue occurred later. They must be prepared to put up with the injection of comparatively large quantities of serum. It might be possible to increase its antitoxic strength, but he doubted if it would ever be possible to separate and preserve in an active form a body which must necessarily possess a very unstable molecular composition. The serum, as prepared by Klein's method, was quite a different substance from that prepared by Roux and Ruffer, and Dr. Klein, in view of this fact, proposed to call his preparation "antimycetin," considering that it had a greater action on the bacilli than on the toxines secreted by them. There were probably in diphtheria two distinct processes—one which was apparently the result of the formation of a virulent poison at the site of inoculation, which gave rise to a series of changes occurring early in the disease; and the other induced by a different series of poisons, apparently formed from the proteids of the body, which appeared to have a definite effect on the muscles and nerves at a late period of the disease. This was on a par with the products formed in such a disease as tetanus, the symptoms of which resembled those of a late stage of diphtheria. This fact might explain how it was that injections had been attended by so little success in tetanus, the disease having already reached an advanced stage before it came under observation. It would seem, in fact, that the ordinary antitoxin only neutralised the poisons formed early in the disease. This view of the presence of two different sets of poisons in diphtheria had been strongly held by Dr. Sidney Martin.

Dr. GOODALL, in reply, said they had noted the date of the disease in their patients as far as this could be ascertained, but as the information was necessarily secondhand and not altogether reliable they did not think it desirable to complicate their conclusions by dwelling on this point. He had such a table, from which it appeared that out of 32 cases treated within three days of the commencement of the disease only 2 died, whereas in 29 admitted between the fourth and the fourteenth day 11 died, so that there was evidently a very marked difference in the results according to the date at which the treatment was initiated. It must be borne in mind that cases were met with that had been suffering for several days without appearing to be very ill, and he was not disposed to abstain from trying antitoxin in any case, for even in the cases which subsequently proved fatal the reaction was very marked. Anuria had been alluded to as a symptom following and apparently caused by the injections of antitoxin. Everyone who knew anything about diphtheria was aware that a tendency to anuria was one of the commonest symptoms in the disease; it was, indeed, one of the direct effects of the diphtheritic poison. If the serum would determine nephritis, how was it that in none of the 19 non-diphtheritic cases treated by serum was there albuminuria? Antitoxin was not to be looked upon as a diagnostic agent, and the occurrence of albuminuria was valueless in diagnosis. They had never seen a rash form as early as twenty-hours after the injection, usually only after several days. He admitted that advantage attached to continuing measures of general treatment, diphtheria being a local disease followed by symptoms of constitutional infection. In their cases, however, they had used nothing but warm water for flushing the throat. On dividing the cases during 1893 into series of 72, the least mortality had been 25 per cent., and the highest 45·8 per cent.; 25 per cent. was, however, the lowest ever reached, and in only one other series was it below 30 (27 per cent.). When the temperature had been high, it usually fell rapidly after the injection, though he had seen it rise after the dose was given.

Dr. WASHBOURN, in reply, observed that antitoxin did neutralise the diphtheritic poison, for this was the means by which they ascertained its strength. It was not, however, akin to the neutralisation of an acid by an alkali—that is to say, it was not a chemical reaction; it appeared to stimulate the body cells to resist the toxine. It seemed that after the diphtheritic toxines had been some time in the body they underwent a change, and this might explain why antitoxin did no good in the later stages of diphtheria. He mentioned the case of a nurse who attended cases of diphtheria in whom they found virulent diphtheria bacilli for months together without any affection of the health or throat. The extreme variations in the mortality commented upon by several speakers would not obtain if a sufficiently large number were taken. One form of death in diphtheria was by the kidneys, suppression following albuminuria without casts or blood. In such a case under his care early fatty change was found in the kidneys on section. Though negative evidence was never so valuable as positive, yet he had never met with a case of paralysis after failure to find diphtheria bacilli in the throat exudation. If antiseptic precautions were taken after tracheotomy the liability to septic pneumonia would be decreased. The noting of the strength of the antitoxin was more important than its source, and it could be easily tested in the manner Dr. Ruffer had described. He was unable to explain the discrepancy between his results and those of Drs. Roux and Caiger, but a single bacteriological investigation was evidently of no great value in prognosis. The "atypical" colonies he had described had been proved by inoculation to be of true diphtheria bacilli. If the material were sewn too thickly on the agar large numbers of small atypical colonies were likely to form.

Dr. KESTEVEN likewise briefly replied.

The PRESIDENT announced that in view of the great importance of this subject the Council of the society had decided to nominate a Committee to report upon the Effects of Antitoxin in Diphtheria.

HUNTERIAN SOCIETY.

Aneurysm of Aorta.—Carcinoma of Bladder.—Carious Lumbar Vertebra.—Fibrosis of Lung.—Bronchial Cast.—Gall-stones.

AN ordinary meeting of this society was held at the London Institution on Dec. 12th, Mr. CHARTERS J. SYMONDS, President, being in the chair.

Dr. ARNOLD CHAPLIN showed a specimen of Aneurysm of the Transverse Arch of the Aorta. The case was that of a man thirty-five years of age whose illness began twelve months ago with shooting pain in front of the chest and barking cough. He died suddenly in the act of bringing up some blood. The necropsy revealed an aneurysm filled with an immense clot, and to all intents and purposes was cured. The opening through which the blood escaped could not be made out, but from the quantity found in the lung and trachea there could be no doubt that there had been leakage. Death was brought about more by asphyxia than by actual syncope due to hæmorrhage. Although the aneurysm was filled with laminated clot and was practically cured, yet it caused death just as surely as if uncured.—The PRESIDENT asked if there had been any dyspnœa and if needling had been tried. He had himself used it in a similar case, and the patient was so much relieved as to be able to go to work.—Mr. OPENSHAW mentioned a case where needling had been tried, and the patient died on the table.—Dr. FRED. J. SMITH said that treatment of an aortic aneurysm must be futile. If a physician had tried to produce such a result he would congratulate himself, and yet here where nature had done the thing herself the aneurysm leaked. In such cases the only thing was to realise that the patient's days were numbered and to make him as comfortable as possible.—Dr. CHAPLIN, in reply, said he had never used needling. He had seen wire introduced almost by the mile.

Mr. TARGETT exhibited a Series of Lantern Slides illustrating various specimens of Primary Carcinoma of the Bladder. The first showed the interior of the bladder apparently turned inside out. There was a large flat growth, the edge having a characteristic rolled margin. The second specimen showed to the left of the left ureteral orifice an oval ulcer with a distinctly elevated base. There were secondary nodules in the submucous tissue. Both the above were specimens of flat ulcers. The third slide showed the bladder laid open in front with a large mass (the size of an orange) filling the interior. The lower part only was eroded, the upper part having been tightly grasped by the bladder. A fourth specimen presented a more marked condition. The bladder had been divided horizontally, showing the fundus. The surface had been taken off with a knife. Projecting from the left wall of the bladder was a tuberous growth. It was important to note how very little change

there was in the muscular wall beyond it, demonstrating the feasibility of treating surgically such a growth without damage to the wall of the bladder itself. With regard to the next specimen it was stated that the patient was admitted to hospital, not for bladder symptoms, but for a tumour. He had a little hæmatemesis before death. Post-mortem examination revealed a very large peri-nephritic abscess, of which the cause was not clear; but it was probably connected with a foul intra-vesical ulcer. The patient had been sounded on several occasions, but with negative result. The symptoms simulated those of stone. The last specimen showed the fundus of the bladder and the orifices of the two ureters. The growth here was of the size of a Tangerine orange, projecting well into the interior of the bladder. It appeared to be epithelial to the naked eye, but Mr. Targett was surprised to find the surface of the growth covered with small papillomata. He considered that all the specimens which he had shown were squamous epitheliomata. He had never seen any specimen of glandular carcinoma affecting the bladder.

Mr. TUBBY showed a specimen of Carious Lumbar Vertebra, which he at first thought to be due to congenital syphilis, occurring in a child aged three weeks. After death it was found that the right hip-joint was full of pus, the vertebral caries, which was the most interesting feature, remaining unrecognised during life.

Dr. GLOVER LYON showed a specimen from a case which he had at first thought to be one of Complete Fibrosis of the Lungs, but had modified his opinion after microscopic examination. The patient was a stout married woman aged forty-one years at the time of her death. She was admitted into hospital in August, 1891, with no other evident symptoms than frequent vomiting whenever food was taken and sometimes when the stomach was empty. At the necropsy the left lung was found to be adherent to the other, and there was much thickening of the glands and fibrous tissue. The lungs contained scarcely any air, the lung substance being replaced by dense connective tissue. The alveoli were disintegrated and the right lung was extremely emphysematous.

Dr. SEQUEIRA exhibited a specimen of Complete Bronchial Cast expectorated by a young man during an attack of acute pneumonia. The material of which it was composed was of a particularly tenacious character, as it extended down quite to the small bronchioles. In this case the diphtheria bacillus had not been sought for.

Dr. SEQUEIRA also showed three large Gall-stones. The patient had severe colic, and after a course of olive oil they were passed per anum.

Mr. OPENSHAW related a case of a woman aged sixty years who was seized with sudden pain in the abdomen, followed by acute obstruction, and upon abdominal section a Gall-stone was found in the ileum which measured one inch and three-quarters by one inch and one-eighth. The woman lived long enough for the incision in the gut wall to unite.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases and Specimens.—Electrical Vision.—Stricture of Œsophagus.—Cardicentesis.

A MEETING of this society was held on Dec. 5th, Dr. CLOUSTON, President, being in the chair.

Mr. WALLACE showed a patient upon whom Gastrostomy had been performed, and another patient after Removal of Malignant Goitre.—Dr. F. D. BOYD showed a child who had been treated for Diphtheria with Antitoxin, tracheotomy having been also performed. It was difficult to determine what share the antitoxin had in producing the successful result. Cultures of the diphtheria bacillus made from the membrane were also exhibited.—Dr. W. RUSSELL showed a Tumour of the Brain removed from an epileptic patient; it had not given rise to any symptoms during life. Death took place four hours after a fit, its immediate cause being a large hæmorrhage which had ruptured into the ventricles.

Dr. DAWSON TURNER read an interesting communication on a Theory of Electrical Vision. An abstract of this paper is published in the present issue of THE LANCET.

Mr. DAVID WALLACE read notes on a peculiar case of Stricture of the Œsophagus.—Dr. WILLIAM RUSSELL said that in 1890 he had under treatment a case, diagnosed as malignant, in which the constriction was at the junction of the middle and lower third of the tube. There was no tumour or growth to account for it, and it was overcome by a stream of water passed into the œsophagus.

Dr. SLOAN read a paper on Cardicentesis, with an account of a successful case. A female nineteen years of age was attacked in May, 1894, with erysipelas of the face and head, followed immediately by severe rheumatic fever. On the eighth day cardiac complications supervened, friction and a systolic mitral murmur were audible, and ultimately effusion into the pericardium and left pleura took place. Difficulty of swallowing was experienced, the pulse, formerly rapid, became alarmingly slow, the patient appeared to be sinking, and one afternoon Dr. Sloan was informed that she appeared to be dead. He found her with an almost imperceptible pulse, livid lips, and profuse cold perspiration. Ether was injected, but without effect. The heart's action and the respiration ceased. In a "moment of excitement" he resorted to aspiration, plunging the needle into the fourth left interspace half an inch to the left of the sternum. From eight to ten ounces of pure blood flowed into the aspirator, showing that the ventricle had been reached. The patient appeared to be dead and the needle was withdrawn, but in what seemed to be half a minute after the introduction of the needle the heart beats were resumed. In two days the temperature fell to normal, in eight days the pericardial effusion disappeared, and within eight weeks the patient was conveyed a distance of seven miles into the country.—Dr. BYROM BRAMWELL corroborated the statement that in this case life had been saved by the cardicentesis. Whether the heart ought to be tapped was a different question. He had in a case of supposed pericardial effusion introduced a diagnostic syringe, which, however, became filled with blood, and death ensued in half an hour. Post-mortem examination showed a small wound of the wall of the right ventricle and the pericardium was full of blood.—Dr. W. RUSSELL recalled a discussion on aspiration of the pericardium held by the society ten years ago, at which the difficulty of distinguishing between a greatly dilated heart and pericardial effusion was recognised. He had made that mistake and had introduced a needle, the mark of which was found in the right ventricle after death; it had done no harm in this case.—Dr. CLOUSTON quoted an instance of an insane patient transfixing the apex of the heart without fatal results.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Simulation of Pregnancy and Abortion.—Unilocular Blood Cyst.—Rigor Mortis in the Fœtus.

A MEETING of this society was held on Dec. 12th, Dr. FREELAND BARBOUR, President, being in the chair.

Professor SIMPSON showed a Malformation of Fœtal Liver: both lobes of the liver were united continuously underneath at the anterior margin and for some distance on the upper surface, the ductus venosus passing through a tunnel on the upper aspect instead of its usual course along the groove on the inferior surface. He also showed the Pelvic Organs and Duodenum after Myomectomy. The patient, who had some slight chloroform sickness after the operation, progressed well for three days, when symptoms of collapse appeared, followed rapidly by death. Internal hæmorrhage was suspected, but on post-mortem examination two duodenal ulcers were found, the base of one with large rupture. There had been no sickness immediately before the symptoms of collapse.—Dr. HAULTAIN exhibited a Fœtus with the Digits of both Hands and the Toes of both Feet completely Fused. There were some hydrocephalus and extreme hydramnios; the brow presented.—Professor SIMPSON brought before the society a Pan used during Labour in Spain. It was in use at present in the Rio Tinto district, but no references could be found about it in any of the Spanish or other works on obstetrics. It resembled a large flower-pot made of glazed earthenware, with thick walls and with a broad projecting rim round the top. It was about fifteen inches high and rather more in diameter. During its manufacture a part of the rim and of one side had been cut out to the breadth of about five inches, and the deficiency extended downwards for two-thirds of its height. As the woman sat on the top with the thighs apart at this portion, this gap allowed of the introduction of the hand of the midwife and the extraction of the child at birth; while the lower part of the pan received the secundines, blood, and

liquor amnii. In this connexion Professor Simpson also exhibited a Labour Chair, formerly in use at Malta.

Dr. HAULTAIN read a paper on Simulation of Pregnancy and Abortion by Vesical Hæmorrhage and Retained Blood-clot. The patient, who was eighteen years of age, had been suffering from erysipelas and had now been attacked with severe bleeding from the genitals. The cervix was found small and firm, and in the anterior fornix a mass was found, similar to an enlarged and pregnant uterus. Two days later she suddenly expired from syncope. On post-mortem examination the uterus was found to be normal; the bladder was dilated and hypertrophied, and an organised clot of the size of a hen's egg was found occupying the interior and attached to the base.

Dr. J. C. WEBSTER read notes on a case of a large Unilocular Blood Cyst developing in the Wall of the Uterus after the Menopause. The patient was under Professor Simpson's care in the Royal Infirmary. Six months previously to admission she felt a sudden pain in the pelvis on lifting a heavy tub, and had a recurrence a week later. After this she suffered much from a bearing-down pain, and soon noticed a swelling in the abdomen, which increased rapidly before admission. She lost flesh and became weaker. The menopause occurred three years before and her menstrual history was normal. On examination she was found to have a thin-walled cystic tumour, which on vaginal examination could be moved without displacing the uterus. On laparotomy it was found to be a large round cyst, 8 in. by 7 in., containing several pints of dark fluid, evidently broken-down blood. He believed the case to be unique, and it was of special interest in showing that a new development could occur in the uterus three years after the menopause, when all active uterine function was past.

Dr. BALLANTYNE read notes on a case of Rigor Mortis in the Fœtus. The mother had not felt any movement for two days previous to the labour, which was premature at six and a half months. The fœtus at birth had the left arm sharply bent at the elbow, and on attempting to unbend it there was marked resistance and the biceps became very prominent. A similar condition was present in the right leg, which was acutely bent at the knee. Two hours afterwards resistance could still be felt, but all signs had disappeared during the night. He then reviewed the literature on the subject, and had collected records of twenty-five cases extending over forty years.

Reviews and Notices of Books.

A History of Epidemics in Britain. By CHARLES CREIGHTON, M.A., M.D. Vol. II. From the Extinction of the Plague to the Present Time. Cambridge: The University Press. 1894.

IN this volume Dr. Creighton completes his admirable history of epidemics in Great Britain and Ireland. It is a work which will, without doubt, take the first rank, not only in medical, but in general literature. While differing from Dr. Creighton's views on some fundamental points—e.g., the value of vaccination—and regretting the tone which he occasionally assumes towards the medical profession, we gladly acknowledge his vast industry, his literary charm, his profound insight, and his philosophic temper. It is his really great qualities which make us the more regret that his writings are not, in the matter of tone and judgment, absolutely flawless; but we may perhaps be pardoned for refraining in reviewing the above work from accentuating our differences with so learned and so able a writer as Dr. Creighton. We turn willingly to the more congenial task of giving our readers some faint idea of the wealth of material and the brilliant critical faculty which characterise his work upon epidemics. The task is a pleasurable one, but it will not be possible within the ordinary limits of a review to do full justice to a work which, alike in matter and manner, need not fear comparison with some of the greatest histories in the language. The form of the work is that of history proper rather than of annals. The writer does not take year by year, or decade by decade, and describe the epidemics appertaining to each: he prefers the more difficult, but certainly more instructive, method of isolating each important disease from its congeners, and tracing the occasion, course, termination, and results of each of its epidemical outbreaks. This plan, the author informs us, has given rise to greater difficulties in his second volume than in the preceding one. "In the earlier period the predominant infection was plague, which was not only of so uniform a type as to give no trouble in the nosological sense, but was often so dramatic in its occasions and so enormous in its effects as to make a fitting historical theme. With its disappearance after 1666 the field is seen after a time to be occupied by a numerous brood of fevers, anginas, and other infections, which are not always easy to identify according to modern definitions." Thus the fevers of the times are variously described as *synochus, synocha*, "nervous," "putrid," "miliary," "remittent," "comatose," and the like; and it becomes a task of great difficulty to decide whether typhus fever lies hidden under these ambiguous designations, or relapsing fever, or enteric fever, or ague. A striking feature of the work is the light which is constantly thrown upon the ordinary history of the times and the social and economic condition of the people. One of the chief purposes of the chapter on Continued Fevers has been "to illustrate the condition of the working classes, the unwholesomeness of towns—London in particular,—the state of the gaols and of the navy, the seasons of dearth, the times of war prices or of depressed trade, and all other vicissitudes of well-being, of which the amount of typhus and relapsing fever has always been a curiously correct index. It is in this chapter that the epidemiology comes into closest contact with social and economic history. In the special chapter for Ireland the association is so close and so uniform over a long period that the history may seem at times to lose its distinctively medical character." We think Dr. Creighton has shown sound judgment in allowing due weight to considerations other than those strictly medical. He has by so doing not only vastly increased the interest of his work, but he has emphasised the very necessary truth that disease is not an isolated factor in human life but has relations the most intimate with the various interests and fortunes of humanity. *Homo sum: nihil humani a me alienum puto* is a motto that befits the physician quite as well as the professed philosopher.

In this volume Dr. Creighton deals with Plague only in regard to its final extinction and disappearance. It had been "the grand infective disease" of Britain from the year of the Black Death, 1348–49, for more than three centuries down to 1666. Thereafter it died out rapidly, the last cases in London occurring in the year 1679. Dr. Creighton is disposed to attribute its extinction partly to the growing habit of burying the dead in coffins, which prevented, or at least minimised, the propagation of the plague virus in the soil, and partly to the increased well-being of the people. He ridicules the idea that the Great Fire of London had anything to do with the extinction of plague, and points out that the disease had ceased in the provincial centres of England after the civil wars, and that it ceased in all the principal cities of Western Europe within a few years of its cessation in London. Further, its disappearance was as complete from the parts of London unaffected by the Great Fire as from those ravaged by it.

Continued Fevers succeed Plague in the epidemiology. The difficulty of recognising the different fevers under the various and inexact epithets bestowed upon them is increased by the controversy regarding the alleged "change of type." It was much debated whether change of type was a reality or a fiction, and whether, if the former hypothesis be accepted, the change depended upon the use or abuse of a certain regimen or treatment. "Fevers," it was argued, "had undergone a radical change since the time of Sydenham, in correspondence with many changes in diet, beverages, and

creature comforts, such as the greatly increased use of tea, coffee, and tobacco, and of potatoes or other vegetables in the diet, changes also in the proportion of urban to rural population, in the use of carriages, and in many other things incident to the progressive softening of manners. In due time the low, putrid, nervous type of typhus fever, which is so much in evidence in the second half of the eighteenth century, ceased to be recorded, an inflammatory type, or a fever of strong reaction, taking its place; so that Bateman of London, writing in 1818, said: 'The putrid, pestilential fevers of the preceding age have been succeeded by the milder forms of infectious fever which we now witness'; while Armstrong, Clutterbuck, and others, who had revived the practice of blood-letting in fevers shortly before the epidemic of 1817-18, claimed the comparatively slight fatality and short duration of the common fever of the time as an effect of the treatment. After 1831 typhus again became low, depressed, spotted, not admitting the lancet, on which occasion the doctrine of 'change of type' was debated in the form that the older generation of practitioners still remember." Continued fever in London from the Restoration down to the present reign would seem to have been chiefly typhus. Where the term "spotted" or "maculated" is added it is probable that these terms were applied only to the more malignant forms of typhus fever, and that the milder forms were included under the generic title of simple continued fever. The chief epidemics were in the years 1685-86, 1709-10, 1718-19, 1726-29, 1741-42, 1799-1802, 1831, and 1847. The infamous window tax must be reckoned among the causes that combined to perpetuate the existence of typhus fever. By the Act of William and Mary, passed in 1696, "every inhabited house owed duty of two shillings per annum, and, over and above such duty on all inhabited houses, every dwelling-house with ten windows owed four shillings per annum, and every house with twenty windows eight shillings." It took a long time to realise that this impost was really a tax on light and air, and that the gain to the revenue was purchased at the cost of propagating disease.

From 1803 to 1815 the amount of fever in England was much below the average, but the fall in prices and commercial distress which succeeded the peace were accompanied by an outburst of fever. In this epidemic the relapsing type was frequent, and this variety was again a marked feature of the epidemics of 1827-28. We are at this juncture on the verge of the epoch when began that long series of observations tending to separate enteric fever from typhus fever, which reached their consummation in the labours of Sir William Jenner in 1849-51. "Abdominal typhus," the "dothiénentérite" of Bretonneau, "bowel fever," &c., began to appear in the returns, and at length evolves the clear recognition of enteric or typhoid fever as an independent and specific disease. This is one of the most interesting chapters in the annals of medicine, but we can only mention it in passing here. The genius, patience, and industry of Sir William Jenner have long received fitting acknowledgment. For some time after the recognition of the distinction between enteric fever and typhus fever the latter continued the more frequent. For the twenty-four years ending 1871 cases of enteric fever in London were only about a fifth of those of typhus fever. The cases of enteric fever increased decidedly after 1865, and of late years there has been very little or no typhus fever.

Dr. Creighton's sketch of the natural history of enteric fever is full of interest. One fact which comes out clearly is the greater frequency of the disease after a severe drought. Virchow's law is well known—viz., that the number of cases of enteric fever increases when the subsoil water falls, and decreases when it rises; but for this cause to take effect it is necessary that the soil should be befouled with animal organic matters, more especially with excremental matters. Dr. Creighton's views on the etiology of enteric fever are summed up as follows: "While the more or less steady or endemic prevalence of typhoid fever is due to the formation and reproduction in the soil of an infective principle (probably of fæcal origin) which affects more or less sporadically the individuals living thereon, after the manner of a miasma rising from the ground, there have been some hardly disputable instances of the infection being conveyed to many at once from a single source in the drinking water and by the medium of milk. But such instances, suggestive though they be and easy of apprehension by the laity, must not be understood as giving the rule for the bulk of enteric fever. In like manner the escape or reflux of excremental gases from pipes or sewers, or the leakage into basements or foundations from faulty plumberwork, are causes, real, no doubt, but of limited application, which do not conflict with, as they do not supersede, the more comprehensive and cognate explanation of enteric fever as an infection having its habitat in the soil and an incidence upon individuals after the manner of other miasmatic infections."

Passing over much interesting matter, we come to Dr. Creighton's chapter on Influenzas and Epidemic Agues. The association of these two diseases will be a surprise to many readers, but it would appear that they are constantly conjoined in the older chronicles. The name "influenza" does not appear until 1743, although the disease itself can be identified much earlier. The epidemic agues are not synonymous with the endemic varieties. Dr. Creighton entirely rejects the notion that England was ever generally malarious and that improvements in drainage are the sole explanation of the gradual disappearance of ague. "The malarious parts of England," he says, "have been tolerably well defined at all times, and at all times the greater part of the country was as little malarious as it is now. It is the frequent reference to agues in old medical writings that has led some modern authors to construct a picture of a marshy or waterlogged England, for which there is no warrant." As regards the origin of the term "influenza," Dr. Creighton does not accept the usual view that it is an allusion to the supposed influence of the stars. He believes that it is derived from the word *influsso*, the Italian form of the Latin *influxio*, a humour, catarrh, or defluxion. On this view "it was not astrology but humoral pathology that brought in the words *influxio* and *influsso*." The epidemic of 1743 was the first to which the term "influenza" was generally applied. Subsequent epidemics occurred in 1762, 1782, 1833, and 1847. Previously to 1743 epidemics of influenza are inextricably mixed up with epidemics of ague. In connexion with the latter disease Dr. Creighton reminds us of the famous Peruvian bark controversy. The bark was brought to Spain in 1632, and tried medicinally in 1639. It seems to have been first used in England about the year 1658. Its efficacy was chiefly apparent in endemic agues, and its use in the epidemic agues (some of which were probably influenzas) led to much disappointment. The earlier epidemics of influenza were marked sometimes by decided catarrhal symptoms, at other times by the symptoms that have become so familiar to us in recent years—viz., severe headache, aching in the bones, fever, and profound nervous malaise. The mortality was often considerable, and, as we have recently seen, fell most upon the aged, the debilitated, the phthisical, and the asthmatic. From 1847 to 1848 until 1889 there was little or no influenza in Great Britain. In this latter year began that remarkable series of epidemics with which we are all familiar.

Dr. Creighton discusses at great length and with conspicuous ability the various views that have been put forward regarding the nature and etiology of influenza. It need hardly be said that the subject is one of much difficulty. "Influenza not an infection which lends itself to a simple

theory of its nature or a neat formula of its cause. All that one can do is to indicate the direction in which the truth lies. Something broad, comprehensive, steady from age to age, telluric if not cosmic, must be looked for." We cannot do justice to his arguments by a brief summary, but we may say that he is inclined to regard influenza as a vast globe-miasm not unconnected with seismic disturbances and great secular changes.

Small-pox comes next in order, and Dr. Creighton's well-known views prepare us for the atmosphere of controversy. Let us look first at some of the non-controversial features of the subject. It is strange to find that prior to the age of the Stuarts small-pox was regarded as a comparatively insignificant disease and was frequently confounded with measles. The small-pox epidemic of 1628 would seem to have been the first characterised by a severe mortality, and it made a deep impression. After the Restoration small-pox became one of the most formidable of diseases and was curiously fatal to members of the reigning dynasty. Charles II. lost a brother and a sister from this disease, which also proved fatal to Mary, consort of William III. Sydenham's practice in small-pox was to leave the discrete variety to nature, but in the confluent variety to interfere actively with emetics, purgatives, and bloodletting. The ill-effects of bloodletting were soon noted by some of his successors. Jenner's essay on Cow-pox, published in 1798, inaugurated the modern era. Dr. Creighton's treatment of the subject of vaccination is very curious. He disclaims any intention as a historian of definitely deciding upon controversial questions. He avows his own unbelief in the efficacy of Jenner's discovery, but in effect tells his readers they may believe in it if they so choose. There is a very strange paragraph on pp. 563–4, in which Dr. Creighton gravely discusses whether the title "Variolæ Vaccinæ" on Jenner's title-page was not a trope, and whether, if so, catachresis would correctly describe it, or perhaps rather hypocorisma, or metalepsis, or synecdoche, or, finally, paronomasia. This paragraph proves that among the author's many admirable intellectual gifts a high sense of humour is not included. We need not on the present occasion enter upon the large question of the efficacy of vaccination. Dr. Creighton's literary labours, admirable as they have been in their results to medical literature, have not, perhaps, specially qualified him for giving a practical judgment on this difficult and momentous question. Our own views are sufficiently well known and need not be reiterated here.

We wish we could follow Dr. Creighton in his account of measles, dysentery, diphtheria, and Asiatic cholera, but we have already exceeded our limits. We take leave of this volume with the feeling that it will prove for its author a "monumentum ære perennius." It is a great work—great in conception, in learning, in industry, in philosophic insight. It is, moreover, a work which no physician and no historian can afford to neglect.

LIBRARY TABLE.

The British Guiana Medical Annual and Hospital Reports. Edited by J. S. WALLBRIDGE, M.R.C.S., and E. D. ROWLAND, M.B., C.M. Edin. Demerara: Baldwin and Co. 1894.—Although the colony of British Guiana lies rather out of the main highways of travel and commerce, this volume, now in its sixth year of issue, is sufficient evidence of the energy of our medical brethren there. It contains more than twenty articles, none of which are devoid of interest. Dr. C. W. Daniels contributes an elaborate paper, largely statistical, descriptive of 619 post-mortem examinations made in the Public Hospital, Georgetown, from April 1st to Dec. 31st 1893. He devotes considerable attention to the pigmentation of the spleen caused by malarial disease, which existed in 17 per cent. of his total cases, in 25 per cent. of the cases of negroes born either in the colony itself or in Africa, in 29 per cent. of immigrant negroes born in the West India Islands, and in 13 per cent. of the "East Indians," who are not further described, but probably denote imported coolies. "The liver is always pigmented (black) in cases of acute malaria, and next to the spleen the pigmentation is the most permanent. ..... In acute fatal cases it—i.e., pigment—is present, in addition to the spleen, in the liver, kidneys, supra-renals, bone marrow, lungs, and brain, as well as in the blood. ..... The relation between malaria and enlargement of the spleen does not seem to be constant and ..... is largely racial." Dr. Neal, medical superintendent of the British Guiana Leper Asylum, contributes two papers on Leprosy, one Surgical and one Statistical. In the latter he remarks: "In all the histories of cases taken within recent years positive proofs of the contagiousness of leprosy are wanting. ..... In these statistics nothing is found to support the statement that many cases of this disease can be traced to vaccination." Dr. Rowland furnishes a copiously illustrated description of the recently built public hospital at New Amsterdam, designed mainly by the Hon. Robert Grieve, M.D. Glasg., C.M.G., Surgeon-General to the colony. A remarkable case of Imperforate Hymen occurring in a married coolie girl is recorded among the clinical notes.

Notes on the Ventilation and Warming of Houses, Churches, Schools, and other Buildings. By the late ERNEST H. JACOB, M.A., M.D. Oxon. London: Society for Promoting Christian Knowledge. 1894. (Manuals of Health Series.)—Ventilation and warming are modern practical subjects upon which the public are probably little educated, and even those possessing an accurate knowledge of the principles involved not infrequently meet with failure when they make an attempt to apply these principles. "Ventilation means draughts" is a common saying, and in many cases, we fear, this is true; and this is not surprising when we consider how many there are of those who undertake to provide ventilation in dwelling-houses who exhibit but the merest veneered acquaintance with common scientific facts, as, for instance, the nature of heat and its modes of distribution, the respiratory and other requirements of the human body, a knowledge of which is absolutely necessary if comfortable and healthy ventilation is to be secured. We have gone through the pages of this unpretending little manual with real interest, and we closed it with the wish that the information it plainly sets forth in a little over 100 pages may be disseminated far and wide, and that it may be used in every educational class as the primer on this important, yet neglected, branch of sanitary science. We observe with regret that the author, who did excellent service in promoting the advancement of hygiene, and was also Teacher of Pathology at the Yorkshire College, Leeds, died while the work was going through the press. The book, though small, is a valuable contribution, and gives evidence of the author's desire to promote the well-being of his fellow men.

Transactions of the American Ophthalmological Society. (Thirtieth Annual Meeting, Washington, D.C., 1894.) Hartford: Published by the Society. 1894.—This volume contains a large number of short communications and notes of cases as well as some of considerable length and importance. Amongst the latter is one by Dr. C. S. Bull on the Treatment of Detached Retina, with a Detailed Report of Thirty-eight Cases. The author holds that the best means of treatment hitherto practised are rest on the back, atropine, a bandage, and the internal administration of some drug which may induce absorption. Pilocarpine is a somewhat dangerous remedy, causing prostration. The effects of puncture of the sclera are generally immediately beneficial, but the good effects are often only transient. Another article is by Dr. Walter B. Johnson on Foreign Bodies in the Orbital Cavity, of which he gives some remarkable examples. Cases

of Malignant Tumour of the Orbit and Eyelids are reported by Messrs. Harlan, Wilmer, and Schweinitz. Dr. Joseph A. White adduces evidence in favour of the use of Low-grade Cylinders in some cases of Asthenopia. Dr. S. D. Risley gives the Result of Treatment and Optical Corrections in arresting the Progress of Myopia. Dr. David De Beck gives in considerable detail a Family History of Irideremia and Coloboma Iridis—cataract operations on two members (brothers) of the same family. Amongst the shorter papers, Dr. Albert Heyl gives a case, with drawings, of Rupture of the Lymph Sheath of a Retinal Vein. Dr. Lucien Howe gives three cases of Ectropion Uveæ, whilst Dr. C. Oliver has devised and gives an illustration of an Artificial Eye. Dr. Oliver also has a good paper on the Clinical and Microscopical Study of Two Cases of Glaucoma associated with Intra-ocular Hæmorrhages.

New Inventions.

THE "REYNOLDS" BANDAGE SHOOT.

WE have received from Messrs. Reynolds and Branson, instrument makers, of 13, Briggate, Leeds, a specimen of a new invention designed by their firm for use in the surgery either of the private individual or public institution, and we have no hesitation in saying that it must be a source of great convenience in either place. As will be seen by the illustration,

the bandage shoot is a case for storing bandages, so designed that no time need be lost by the surgeon in searching for the particular size of bandage required. The case is filled from the top, and a sample of each size, clean and ready for use, presents at the bottom. The case is made in two sizes—viz., 3 ft. 3 in. by 1 ft. 6 in., and 1 ft. 8 in. by 8 in., and in either case save at the bottom ledge does not project more than 2¼ in. from the wall, so that the contrivance does not take up much space even in an already crowded room. The larger size, which holds eleven dozen bandages of five different widths varying from 3 in. to 1 in., is sold at 17*s.* 6*d.* empty and 36*s.* full; the smaller, which holds three dozen and a half bandages ranging in width from 3 in. to 1 in., at 10*s.* empty and 14*s.* 6*d.* full. At the back of the shoot two wooden splints are fastened, and the little reel at the side contains six yards of half-inch ribbon sticking-plaster. The whole can be hung up on a nail, and can, therefore, be transferred bodily to the scene of an accident. We have no hesitation in saying that in the bandage shoot Messrs. Reynolds and Branson are supplying to the profession a really useful article, which may save time, temper and money, for what is more exasperating than to find at the end of an operation or any other moment of urgency that we have not to hand the bandage we require. Yet in the best-regulated institution or tidiest surgeries the accident has been known to occur.

THE CLIMATE OF NEW ZEALAND.

MR. S. S. BLACKBURNE, of Christchurch, New Zealand, writes to us as follows:—

About a year ago[1] you published a series of tables giving the average temperatures in all latitudes on the long sea voyage to and from New Zealand, with the view of showing the superiority of this voyage over all others for the purposes of health. May I now supplement the interesting information you then gave by some comparative tables, which, I think, demonstrate that when persons in search of health get as far as New Zealand they will do well to remain in the colony as long as possible?

COMPARATIVE TABLES

TABLE A.—*Average Monthly Mean Temperatures at Greenwich.*

Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
37°	39°	41°	46°	53°	59°	62°	61°	57°	50°	43°	39°	49

TABLE B.—*Average Monthly Mean Temperatures in New Zealand.*

Month.	Mongonui.	Auckland.	Wellington.	Christchurch.	Dunedin.	Invercargill.	Average of colony.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January	68	68	63	62	57	57	62
February	68	68	63	61	58	57	62
March	67	66	62	58	55	54	60
April	63	62	57	54	52	51	56
May	58	57	53	48	47	46	51
June	56	53	49	43	44	43	48
July	54	52	48	43	43	43	47
August	54	52	48	44	43	43	47
September	56	56	51	49	47	47	51
October	59	57	54	53	50	50	54
November	62	61	57	57	53	52	57
December	67	65	61	61	56	57	61
Year	62	60	55	53	50	50	55

TABLE C.—*Comparison of Mean Temperatures between Greenwich and New Zealand Average.*

Greenwich.	New Zealand.	—
Nov., 43°; Dec., 39°; Jan., 37°; Feb., 39°; March, 41°; April, 46°.	No months so cold.	37°-46°.
May, 53°; Oct., 50°.	May, 51°; June, 48°; July, 47°; Aug., 47°; Sept., 51°; Oct. 54°.	47°-54°.
June, 59°; July, 62°; Aug., 61°; Sept., 57°.	Nov., 57°; Dec., 61°; Jan., 62°; Feb., 62°; March, 60°; April, 56°.	56°-62°.

TABLE D.—*Comparison between Hottest and Coldest Months at Greenwich and New Zealand Average and Extremes.*

—	Hottest month. Average.			Coldest month. Average.		
	Max.	Min.	Mean.	Max.	Min.	Mean.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Greenwich	72	52	62	41	33	37
New Zealand (average)	71	53	62	54	40	47
New Zealand (extreme North).	76	60	68	62	46	54
New Zealand (extreme South).	63	46	57	51	35	43

[1] THE LANCET, Oct. 21st, 1893: Sea Voyages for the Surgical Convalescent, with Statistical Tables, by Leopold Hudson, F.R.C.S. Eng.

THE LANCET.

LONDON: SATURDAY, DECEMBER 29, 1894.

THE ANNUS MEDICUS 1894.

Medicine.

IT has been our habit in this annual summary of the medical year to deal separately with the headings of medicine and pathology, but it will be evident to all that the distinction is a very arbitrary one, now and then academically useful, but practically of no importance. The literature and scope, moreover, of medicine has now become so large that we do not make any attempt to review a year's proceedings in a few words; we rather desire simply to indicate a few of the points that during the year have seemed to us departures worthy of extended treatment; and for that treatment we refer our readers to the volume itself.

It is not easy in these days of scientific activity and eager search after novelties to clearly appreciate the gains to knowledge which a single year brings forth. Many observations and the conclusions drawn from them have to be tested by experience before they rank among permanent acquisitions; but when, as in the case of a disease like influenza, the attention of the whole medical world is directed to the same thing it might be thought that after its visitation something would have been added to the knowledge of the malady. The address which Sir T. GRAINGER STEWART delivered before the British Medical Association upon this subject presented in a lucid manner the lessons derived from the recent pandemic; yet, on the whole, it must be confessed that the actual amount of new light thrown upon the nature of this disease has not been very great, for although, as was pointed out, the character of the malady accords with the theory of its dependence on a micro-organism, still it would be going too far to admit that the bacillus which was discovered by PFEIFFER is really the *causa causarum*. Still, much has been learnt of the complications and sequelæ due to the infection of influenza, and the wider epidemiological studies made in Germany by a collective investigation committee, and in this country by Dr. PARSONS, have taught us much concerning its progress and the conditions of its spread. Without doubt the most noteworthy gain to the science of infective disease has been in regard to diphtheria, for which the Budapest Congress afforded the opportunity of gathering the experience of all countries. The pathogenic character of the Klebs-Löffler bacillus has been practically accepted, and the remarkable researches upon the production of immunity from diphtheria, with the still more striking results of the application of this discovery to treatment, as expounded by M. ROUX at the Congress, are at present engaging the attention of the clinical and pathological world. Nor has there been wanting the wider view of the conditions under which diphtheria arises and extends in communities, as seen in the reports presented to that Congress and in the recent presidential address of Mr. SHIRLEY MURPHY at the Epidemiological Society. It is becoming more and more evident that the bacteriological side of pathological research is fast absorbing the attention of those who are working at pathology, whilst comparatively few additions are being made to the older departments of that science. At present, too, the line of study has passed in many diseases beyond the determination of the presence of pathogenic organisms, and is being pursued upon the nature of their toxines and the problems of immunity. The discovery, or rather the theory, of "antitoxins," first enunciated in regard to pneumonia by the Drs. KLEMPERER, then applied to tetanus by TIZZONI, BEHRING, and KITASATO, and to diphtheria by BEHRING, has opened up a new field which may yield abundant fruit before many years have passed. And in passing it must be mentioned that the value of vaccination as a prophylactic for small-pox has been abundantly verified in the epidemic which seems now happily on the decline in this country, so that whatever may be the outcome of the Royal Commission now sitting the confidence of the medical profession in the inestimable value of JENNER'S discovery can only be confirmed, and to this the investigations of Drs. MONCKTON COPEMAN and KLEIN have rendered scientific support. The appearance of plague in China last spring led to the discovery by Professor KITASATO of the bacillus which seems to be its cause, and has afforded a rare opportunity for the observation and record of the characters of a disease which it might have been hoped had become extinct. Much attention is being given to malarial diseases, especially in Italy, whence have proceeded some of the most convincing researches upon the various forms of hæmatozoal parasites that characterise these affections. In tuberculosis there is nothing special to record, but in actinomycosis there have been several cases reported which are valuable as enlarging our knowledge of this affection in man—e.g., the monograph of ILLICH of Vienna, who analyses 421 cases. Attention has been directed by Dr. CLEMENT DUKES and others to the occurrence of Epidemic Roseola and its distinction from measles, on the one hand, and rötheln, on the other; the Membranous Inflammation of the Throat occurring in Scarlet Fever has been carefully studied by Dr. GOODALL, and the subject of Contagious (non-diphtheritic) Sore-throat by Dr. WHEATON. A valuable monograph upon Typhoid Fever, from the pen of Dr. OSLER, appeared in the Johns Hopkins Hospital Reports, who also in the discussion on Pyrexia at the meeting of the British Medica Association bore testimony to the value of cold in the treatment of this and other fevers. Sir W. BROADBENT'S Cavendish Lecture on the same subject was also emphatic in this direction. In regard to many diseases the main point of inquiry has been chiefly directed to treatment The bounds of surgical intervention for the rescue of patients whom no medical aid can succour have been extended with gratifying success in the case of Perforating Gastric Ulcer, as evidenced in cases reported by Mr. HASTINGS GILFORD, Mr. BENNETT, and others, the subject forming also the text of a good discussion at the Bristol meeting of the British Medical Association. The Treatment of Chronic Heart Disease by the System of Baths and Exercise carried out at Nauheim was brought under notice in THE LANCET by Dr. BEZLY THORNE, and later at the British Medical Association meeting by Dr. WETHERED, both of whom testified to its value. The prescription of Bone Marrow

in Pernicious Anæmia by Professor FRASER is in accordance with the principle underlying the thyroid treatment of myxœdema. The use of thyroid extracts would seem, however, to be extended far beyond the limits of their original prescription. The Treatment of Pulmonary Diseases by Intra-laryngeal Injections has been brought under notice by Dr. BRONNER and by Dr. COLIN CAMPBELL. A successful case of the Treatment of Tuberculous Meningitis by Drainage of the Subarachnoid Space was brought before the Medical Society by Dr. WALLIS ORD and Dr. WATERHOUSE. Apart, however, from the therapeutic side of medicine, there have been several contributions of clinical and pathological value, such as Dr. DICKINSON'S study of Albuminuric Ulceration of the Bowels, Dr. RINGER'S papers on Cardiac Valvular Disease, Dr. COLMAN'S on "Colour Hearing," Professor LAACHE'S address on Cardiac Degeneration at the Rome Congress, and the address given on the same occasion by Professor NOTHNAGEL on the Adaptation of Organs to Pathological Changes. The additions to medical literature have been numerous and important. Limiting the record to works in the English language, we may mention first the writings of three of the most eminent physicians of the Victorian era—namely, the "Collected Essays" of Sir W. GULL, issued by the New Sydenham Society; the publication of Sir W. JENNER'S Clinical Lectures and Essays, including his invaluable lectures on Rickets; and the monograph by Sir ANDREW CLARK on "Fibroid Phthisis," written in conjunction with Drs. CHAPLIN and HEDLEY. A notable production is the magnificent "Atlas of Skin Diseases" by Dr. RADCLIFFE CROCKER, which promises to be the foremost work of its class. Other Atlases are that of Pathological Anatomy by Drs. KAST and RUMPEL and on Pathological Histology by Drs. KANG and SCHMERL; whilst Dr. BYROM BRAMWELL has entered upon the third series of his excellent Clinical Atlas. The "Textbook of Medicine," by American Practitioners, has been completed and is likely to be widely read. Dr. CREIGHTON'S admirable "History of Epidemics in England" is a contribution to epidemiology which should go far to enhance interest in this important subject. Nor should the valuable translations of the works upon Malaria by LAVERAN and by MARCHIAFAVA and CELLI, which we owe to the New Sydenham Society, be omitted from the real gains to our medical literature. The appearance of a second edition of "Quain's Dictionary of Medicine" and of the "Dictionary of Medical Terms" by Dr. GOULD have been welcomed as solid contributions of scientific value. Amongst monographs may especially be mentioned the translation of METCHNIKOFF'S "Comparative Pathology of Inflammation," KELYNACK'S "Pathology of the Vermiform Appendix," Dr. BALFOUR'S "Senile Heart," and Dr. W. EWART'S learned work on the Pulse.

Surgery.

No event of an epoch-making character has occurred in the world of surgery in the year just ending, but sure progress has been maintained in all its various divisions. The general tendency in the treatment of operation wounds is certainly towards asepsis as opposed to antisepsis; and to this end sterilised instruments and dressings are being much employed, especially in hospital practice, where the facilities are greater, for there can be no doubt that asepsis requires more "apparatus" than the present simplified form of antisepsis which it is attempting to displace. More advance has probably been made during the year in the surgery of the abdomen than in any other department. Resection of portions of diseased or injured bowel have been frequently and successfully performed, and more especially has advance been made in the operative treatment of perforating ulcers of the stomach and duodenum. The Lettsomian Lectures on Peritonitis, delivered before the Medical Society by Mr. FREDERICK TREVES, were of much value in connexion with this great danger of abdominal surgery. In the surgery of the brain and spinal cord several cases of interest have been recorded; laminectomy for fracture of the spine with paraplegia, though at one time advocated somewhat energetically, has of late been but rarely performed, though, of course, it continues to be a perfectly satisfactory treatment for tumours. The intravenous injection of saline solutions is steadily growing in appreciation, but chiefly in regard to cases where the fall of blood pressure is due to an excessive loss of blood, and not merely to collapse. The internal iliac artery has been successfully tied by Mr. PITTS by the "transperitoneal method" for a pulsating tumour of the buttock. This is the first occasion in this country of this vessel having been ligatured by this method.

In the treatment by ligature of aneurysms of the extremities we have been accustomed to accept almost without question the teaching of HUNTER, that the ligature should be applied at a distance from the sac, as there the vessel is more likely to be healthy than close to the aneurysm, forgetting that these conclusions were arrived at in pre-antiseptic days, when suppuration was an almost necessary accompaniment of a wound, and certainly of a wound for ligature of a vessel in its continuity, as the ligature was always made to come away, and that was only possible by suppuration. Lately attempts have been made to ligature the artery nearer the aneurysm, and with good results, there being less likelihood of return of pulsation and apparently no increased risk of secondary hæmorrhage; and, indeed, in cases of amputation in elderly subjects the arteries are often found to be extensively diseased where they have to be tied, and yet how very rare is it in these cases for secondary hæmorrhage to occur. A still further step in the same direction has been taken by reverting in the treatment of aneurysms of the extremities to the method of ANTYLLUS, ligaturing the vessel on both sides of the aneurysm and excising the sac. This is the received treatment of purely traumatic aneurysms, but an application of it to non-traumatic aneurysms has been made during the past year. In both cases the aneurysm had become diffuse, but the excellent results obtained in those cases certainly justify its application to aneurysms before rupture, and, with perfect asepsis, we can see no reason why the method should not in time take its place among the recognised procedures for the cure of these aneurysms. Another instance in which the superiority of modern surgery is strikingly shown is in the result of treatment of strangulated hernia. It is not many years since the mortality from this condition was very great, and surgeons often approached the operation with feelings of misgiving; but now the death-rate is very low, and the deaths that do occur are almost invariably due to the long delay on the part of the patient in

applying for surgical aid. This success was well shown in a series of fifteen cases under treatment this autumn at St. Thomas's Hospital and recorded in THE LANCET. A very interesting case has been placed on record of trephining for hemiplegia in a child six years of age; the birth was difficult and the paralysis apparently originated at that time; the right side was very badly developed, and the mental and moral development was poor; daily epileptiform attacks were also present. On trephining over the left motor area a cyst was found and punctured, but it was not removed. The psychical and physical conditions soon showed signs of improvement, and six months after the operation the improvement still continued. The case is important as showing that a considerable lapse of time, amounting in this instance to six years, does not contraindicate an operation even in the case of a brain so impressionable as that of a child. The department of surgery is ever attempting to invade the neighbouring department of medicine, and one of the most recent instances of this is seen in the treatment of cerebral hæmorrhage. It was shown some time ago by Mr. HORSLEY and Mr. SPENCER that ligature of the common carotid artery on one side controlled hæmorrhage from the basal ganglia of the same side; the practical application of this fact was obvious, and two cases have been recorded in which this treatment of cerebral hæmorrhage has been adopted. In the first case, that of a man aged fifty years, paresis of the left arm and leg occurred and steadily increased, until on the fourth day complete paralysis of the left arm and marked weakness of the leg and face on the same side were present, but there was no loss of consciousness. The right common carotid artery was ligatured, and two days later the paralysis began to diminish, and at the end of two months the left arm was weak but not paralysed, the left side of the face still drooped, and the leg was slightly rigid. In the other case the onset of the paralysis was more rapid, and by the time the operation could be performed the paralysis was complete and the patient was quite unconscious. No improvement followed the operation, and death occurred a few hours later. The cases are obviously too few in number to enable us to estimate the value of the treatment and the conditions in which it might be advisable are not common. The paralysis must be slowly progressive and certainly due to hæmorrhage occurring in the substance of the basal ganglia. Since the administration of extract of thyroid has become common and the signs of "thyroidism" have become well known it has often been suggested that exophthalmic goitre is due to an excessive action of the thyroid gland with over-formation of its secretion; if this theory be correct removal of a portion of the gland should bring about a cure, and a case has been recorded in which partial thyroidectomy was performed in 1889 on a patient suffering from Graves' disease; the symptoms began to diminish very soon after the operation (removal of the whole left lobe), and now, five years later, the patient is completely well except for a somewhat too frequent pulse. The case is suggestive, but in view of the fact that many cases of Graves' disease ultimately recover spontaneously too much importance must not be attached to it.

Obstetrics and Gynæcology.

At the meeting of the International Medical Congress, held at Rome in the early part of the year, communications on Symphysiotomy of much interest and importance were made by Professor PINARD and Professor LEOPOLD. In the Clinique Baudelocque, from Feb. 4th, 1892, to March 8th, 1894, there were performed thirty-six symphysiotomies, one pubiotomy, and one ischio-pubiotomy; there were two maternal deaths and four fœtal deaths. In all the cases that recovered the consolidation of the pelvis was sufficiently firm for the patients to get up and walk about easily by the twentieth day. Professor PINARD concludes that all operations involving destruction of a living child should be forbidden, and that symphysiotomy only ought to be performed in cases where a study of the pelvis leads to the conclusion that a separation of the pubic bones to an extent of not more than 7 centimetres will allow the passage of the fœtal head at term, and that within the limits indicated symphysiotomy should be preferred to the induction of premature labour. Professor LEOPOLD gave symphysiotomy a somewhat guarded approval. While he considered that it had attained the position of a recognised obstetric operation, it ought not at the moment to be one very commonly performed; it was especially unsuitable for primiparæ. He thought it necessary to keep patients under observation for a year or two after the operation before judging as to the after-effects. He was also of opinion that the hæmorrhage during the operation, and the lacerations of the vagina, might occasion as much difficulty as the after-treatment. The scope of the operation, in Professor LEOPOLD'S opinion, was in flattened pelves with the conjugate varying from 7½ to 6½ centimetres. In the subsequent discussion ZWEIFEL spoke in favour of awaiting spontaneous delivery after section of the symphysis, and maintained that in most of the cases in which lesions of the soft parts had occurred the lesions in question were caused by the use of forceps. Dr. VARNIER, in supporting symphysiotomy, characterised the induction of premature labour as a blind and empirical method, which had had its day, and should now be abandoned. Dr. SÄNGER, in concluding the discussion, said that there was little difference in the mortality of symphysiotomy and Cæsarean section. He compared the time occupied in the two operations, a comparison which told in favour of Cæsarean section. He considered that, taking the lower limit of the true conjugate as given by Dr. MORISANI at from 6 to 7 centimetres, the field for symphysiotomy should be somewhat more restricted, and that for the Cæsarean section correspondingly extended. At the same Congress the question of what is the best treatment for the pedicle after abdominal hysterectomy for fibroids was discussed on reports by Professors MARTIN, MANGIAGALLI, and DE OTT. Without following the discussion in detail it is clear from it that the radical treatment of uterine fibroids has of late given much better results than formerly, and this is true whatever operation be preferred, whether the stump be treated by the extra-peritoneal method or by the intra-peritoneal method, or whether the operation chosen be the complete extirpation of the uterus. Professor MANGIAGALLI laid stress on the importance of separating the class of cases where there are

extensive outgrowths into the broad ligaments from cases where the fibroids are only interstitial, subperitoneal, or submucous. Whatever method of operating be chosen the prognosis was far graver in the case of intra-ligamentary growths. There is no doubt that BAER'S method of operating is, in suitable cases, one that gives very satisfactory results. Essentially it consists in tying the broad ligaments and the uterine arteries on each side, making peritoneal flaps in front and behind, cutting away all the uterus except little more than the vaginal portion of the cervix, doing nothing whatever to the cervical canal, avoiding putting any sutures in the tissues of the cervix, and merely suturing the flaps of peritoneum over the stump. There have been some papers of considerable interest read before the Obstetrical Society of Edinburgh during the year. Among them we may mention that by Dr. HAULTAIN on the Electrical Treatment of Uterine Fibroids and Subinvolution. Of twenty-two cases of uterine fibroids treated by electricity he considered seventeen were cured, his definition of cure being cessation of morbid symptoms for a period of over twelve months from the last application of the current. He especially laid stress on the hæmostatic action of the current. In the discussion that followed Dr. BERRY HART ably criticised the electrical treatment, pointing out especially the difficulty of establishing a causal relation between treatment and cure and the importance of allowing for the tendency to spontaneous improvement. Dr. BERRY HART'S own experience of electricity in the treatment of endometritis and fibroids was that "it was tedious and disappointing; he had given electricity a fair trial and had now abandoned it without regret." He reminded the society that many forms of treatment now exploded were once advocated because they cured. He had himself seen a fibroid tumour the size of a six months' pregnancy disappear without treatment. Dr. BALLANTYNE, before the same Society, read notes of a case in which he had induced labour for contracted pelvis by the use of Hegar's dilators (up to No. 12) followed by the introduction of Champetier de Ribes's bag. Labour began in half an hour, and the child was delivered six hours and three-quarters after the introduction of the bag. Intra-uterine injections of glycerine had been previously tried in this case for inducing labour with a negative result. The child died next day. It would appear that symphysiotomy at term would have been a better operation in the interest of the child, and probably could have been done without any great risk to the mother. An interesting discussion took place at the same society on the question whether antiseptic vaginal douching should be made a routine practice in the puerperium. The general opinion of the society was, however, decidedly against recommending vaginal douching as a routine practice during the puerperium—that is to say, against regarding it as necessarily a part of antiseptic midwifery. At the Obstetrical Society of London there have been many papers and communications of interest during the year. Among them may be mentioned one on Six more Cases of Pregnancy and Labour with Bright's Disease by Dr. HERMAN, and a note on Vaginal Secretion by Dr. GOW. Dr. HARRIS of Philadelphia sent a short paper advocating symphysiotomy on the ground that its record during the past eight years had been encouraging. The majority of English obstetricians do not, however, seem to regard this operation very favourably, which is the more remarkable when we remember the large number of successful cases reported from the Continent and America. An interesting paper was read by Dr. GOW on the Relation of Heart Disease to Menstruation, from which it appears that, in fact either amenorrhœa or scanty menstruation is a far more common accompaniment of heart disease than menorrhagia. Dr. AMAND ROUTH read a paper on Cases of Associated Parovarian and Vaginal Cysts formed from a Distended Gartner's Duct. Dr. BRAXTON HICKS contributed a paper on Intermittent Contractions of Uterine Fibromata and in Pregnancy in relation to Diagnosis. Dr. REMFRY read a paper describing a case of fibroid tumour with menorrhagia, in which he had ligatured and divided the upper part of both broad ligaments, and compared this procedure with removal of the uterine appendages in such cases. In the case in question the hæmorrhage returned after an interval of three months' improvement following the operation. Dr. GILES read a paper on the Temperature immediately after Delivery in the relation of the duration and other characteristics of labour, based on an analysis of 600 cases. Dr HERMAN brought forward a communication on the Change in Size of the Cervical Canal during Menstruation, in which he concluded that slight spontaneous dilatation of the cervical canal takes place during menstruation. Dr. CULLINGWORTH in October read a very interesting paper on Three Cases of Pelvic Inflammation attended with Abscess of the Ovary, with Clinical Remarks. He pointed out that the form of pelvic inflammation with which small suppurating cysts of the ovary and ovarian abscesses are usually associated is not pelvic cellulitis, but salpingitis, the ovarian suppuration being due to secondary infection. Dr. CULLINGWORTH laid stress on the illusory character of a temporary subsidence of symptoms with apparent restoration to health in some of these cases of severe pelvic inflammation. He referred to eighty-three cases in which he had performed abdominal section for non-cellulitic pelvic suppuration. An analysis of these cases shows that ovarian suppuration, next to purulent salpingitis, is the most frequent form of non-cellulitic suppuration in the female pelvis. Dr. BRAITHWAITE read a paper on atrophy with collapse (cirrhosis), fibroid degeneration, and angioma of the ovaries, in the discussion upon which the PRESIDENT dwelt on the difficulty of distinguishing between ovaries that were not really diseased, but which presented some of the appearances mentioned by Dr. BRAITHWAITE, and healthy ovaries. Dr. GRIFFITH communicated a note on the importance of a decidual cast as evidence of extra-uterine pregnancy, and referred to a case where, though such a cast was passed, abdominal section showed that there was no extra-uterine pregnancy; and at the last meeting of the year Dr. LEWERS read a paper on a case of Primary Carcinoma of the Body of the Uterus in which vaginal hysterectomy had been performed, and more than two years and a half had elapsed without recurrence; he also referred to the five other cases in which he had performed vaginal hysterectomy for cancer of the body of the uterus. The specimen and sections of it were exhibited at the meeting—a very important point in cases operated on for cancer where no recurrence takes place.

Therapeutic Progress.

Undoubtedly the event of the year, so far as therapeutic interest is concerned, is the widespread attention called forth by the introduction of antitoxic serum. The impetus was given by the paper of M. ROUX at the Congress of Hygiene and Demography at Budapest, though BEHRING, ARONSON, and others had previously been working in the same direction. The results claimed for this antitoxic serum in the treatment of diphtheria at first appeared so surprising that although many have been induced to investigate, many have perhaps held aloof from a dread of yielding too readily to the wave of enthusiasm. The medical journals have, however, been gradually accumulating careful observations, and the latest experiences detailed at the Clinical Society seem to show that antitoxin possesses a marked power of diminishing the mortality, and although accounts of some ill-effects have reached us from abroad, these do not appear to have been witnessed by English observers. Far more numerous experiences must yet be collected before it is possible to consider that this form of treatment can be generally adopted with safety, but enough has been done to show the need of careful observations upon cases in which the presence of the diphtheritic element has been proved. Dr. LAUDER BRUNTON, in his Harveian Oration, took a sanguine view of the future medication by antitoxins and by organic juices, and papers have appeared during the year upon the treatment of tetanus by antitoxin and upon the value of thyroid products in a variety of conditions. Thyroid extract has been used in exophthalmic goitre, in sporadic cretinism, in lupus, and in psoriasis, and it has been found to possess some therapeutic value in syphilitic psoriasis and in "malignant" Indian syphilis; a case has, however, been put upon record in which glycosuria was attributed to thyroid extract. Another animal product which has attracted notice during the year is bone-marrow, which is stated to have given good results in leucocythæmia and pernicious anæmia. With regard to the organs of circulation no very marked progress has been made; the value of strophanthus has been further investigated, and some stress has been laid upon the use of morphine in heart disease, especially if given with digitalis or strophanthus. Apocynum cannabinum has been said to possess powers similar to those of digitalis. Another suggestion of some value is the treatment of chilblains by digitalis. Some cases of aneurysm have been treated by venesection with apparent advantage. The question of the absorption of iron has been re-studied, while ferratin has been stated to be prompt, useful, and harmless in the treatment of chlorosis, and it is said to give results superior to those derived from Blaud's pills. Pernicious anæmia has been successfully treated with arsenic, and the effect of iodide of potassium upon the blood has been carefully analysed. As hæmostatics, lemon juice and gossypium herbaceum have been recommended, and senecio jacobœa has been ranked with permanganate of potassium and oxide of manganese in the treatment of functional amenorrhœa. Phthisis in its various forms continues to call forth suggestions; among the methods which have been recommended the following may be mentioned: salol, nitrate of silver, aniline, the inhalation of carbolic acid, the use of ergot for the night sweats of phthisis, and the injection of chlorine gas into pulmonary cavities, with regard to which it is important to remember that the method is dangerous unless the layers of the pleura are adherent. Intralaryngeal injections have also been employed in the treatment of diseases of the larynx, trachea, and bronchi. Parachlorphenol has been used as a disinfectant of tuberculous sputum, while the effect of creasote on the virulence of the tubercle bacillus formed the subject of a very careful paper by Dr. W. K. FYFFE, who found that when used as inhalation there was practically no result; that when taken by the mouth, even in small doses, there was marked diminution in virulence; while the restraining influence was also great when it was administered subcutaneously. The discussion at the Bristol meeting of the British Medical Association upon the treatment and complications of whooping-cough was not encouraging; as might, perhaps, have been anticipated, there was general agreement that we are at present powerless to arrest or cut short this disease; but some stress was laid upon douching the nostrils with perchloride of mercury or boracic acid solution, and upon filling the room with vapour impregnated with creolin, carbolic acid, eucalyptus, benzol, or thymol. Bromoform, which was lately vaunted in whooping-cough, has given unequal and disappointing results. Codeia, on the other hand, is said to possess the power of allaying spasmodic cough which is not apparently dependent upon local lesion. Very little has been written upon the digestive system; the subcutaneous injection of arsenic is said to be beneficial when arsenic taken by the mouth causes gastric disturbance. Strychnine has been stated to inhibit the secretion of the pancreas, and some attention has been paid to anthelmintics. Thus santonin is said to have produced urticaria, and a paper upon thymol as an anthelmintic appeared in our columns, together with a paper on the treatment of tapeworm, which referred more particularly to methods of administration. Various diuretics, more particularly the xanthine derivatives, caffeine and theobromine, and their combinations with iodine, have been studied; while the supposed diuretic influence of asparagus has given rise to much correspondence in our columns. The value of symphorol (sodium caffeine sulphonate) as a diuretic has been disputed. Turpentine has been recommended in incontinence of urine, while senna is said to influence the form of incontinence often met with in locomotor ataxia. Toxic symptoms are stated to have resulted from the employment of sulphonal in renal disease, and a paper has appeared stating that piperazine possesses solvent properties superior to those of borax, lithium citrate, sodium carbonate, or potassium citrate. Neurasthenia and its treatment were discussed at the Bristol meeting; epilepsy has been combated with biborate of soda and with adonis vernalis given with bromides. A suggestion has also been made to employ atropine during the intervals when bromides are discontinued. Locomotor ataxia has been treated with phosphatic injections and with iodides; glycerophosphates have been used in nervous depression; duboisin and trional have found favour as hypnotics, and the latter has been recommended in delirium tremens; and arsenic, employed for chorea, is said to have produced neuritis. For the treatment of sea-sickness chlorobrom has been advocated, in

conjunction with a cholagogue pill and spare, dry diet. Investigations have been made with recent drugs in ophthalmology, notably with scopolamine, tropacocaine and hyoscine; cocaine has been found of service in rheumatic and other inflammatory conditions of the eye, and lactic acid in the treatment of corneal ulcers, while amblyopia has been referred to dinitro-benzol. The results of the Hyderabad Chloroform Commission formed the subject of a paper and discussion at the Royal Medical and Chirurgical Society, while some fatal after-effects of chloroform on children have been described. Pental has been recommended as an anæsthetic, and it is claimed to be less dangerous than chloroform and to have no action upon the heart. A valuable inquiry has been made by collective investigation regarding the importance of ill-effects following the use of antipyrin, antifebrin, and phenacetin; and it has been stated, on the other hand, that by gradually increasing the dose antipyrin may be safely given in large doses. Pyrexia and its treatment were discussed at the meeting of the British Medical Association at Bristol, and the consensus of opinion appeared to be in favour of reducing temperature by cold rather than by antipyretics. Sir W. BROADBENT published in the columns of THE LANCET a paper on Some Points in the Treatment of Typhoid Fever. The suggestion to treat small-pox by the exclusion of the chemical rays of daylight by Feilberg's method has been adversely criticised. Diphtheria has been treated by soluble salts of mercury, by menthol, by pyoktanin, and by sublimed sulphur. Intravenous injections of sublimate solution have been used in malaria, guaiacol has found some favour as an external application in fever, and two new antipyretics, neurodin and thermodin, have been introduced. A recurrence of influenza led to further experiences of the bicarbonate of potassium treatment, and also to a recommendation of opium during and after the attack. Cinnamon is stated to have given relief of pain in cases of cancer, but this happy result has not been confirmed by all who have tried it. Formaldehyde has been used as an antiseptic, sulphur has been employed in surgical practice, and iodide of rubidium has been recommended when there is intolerance of iodide of potassium. Amongst other new remedies the following deserve mention: trikresol, amylene hydrate, gallanol, diaphtol, malakin, chloralose, tolysal, salophen, and teucrin. Many interesting papers and reports have also appeared upon more general subjects, such as chemistry in relation to pharmacology, therapeutics, and materia medica; upon documentary evidence concerning the use of opium in India; and upon the connexion between chemical constitution and therapeutic action. This enumeration by no means exhausts the list of therapeutic subjects upon which observations have been made during the past year, but it will show sufficiently clearly that in spite of the hopes which are raised by new theories of treatment, numerous investigators continue to throw new light upon much that is obscure in the treatment of disease, and that their labours range from criticism of the claims of the newest arrivals to considerations of the methods of action of drugs with which we have long been familiar.

Dental Surgery.

During the course of the year the subject of advertising has created a great stir in the dental world. A vigorous effort has been made by the Council of the British Dental Association, but not till considerable outside pressure was brought to bear upon it, to induce the General Medical Council to put a stop to this practice, and they have so far succeeded that the General Medical Council passed a resolution to the effect that advertising might easily go so far as to constitute "infamous conduct." The proposed shortening of the dental curriculum of the Irish College by the omission of the "apprenticeship" was successfully combated. From another point of view apprenticeships have attracted attention—viz., as to whether mechanical training might not be better accomplished at the dental schools than with private practitioners,—but this question is still *sub judice*. Several deaths under chloroform, used during the extraction of teeth, have given rise to strong expressions of opinion that its employment in such dental operations is never justifiable, and the practice was not defended by Scotch practitioners with their usual warmth. One death occurred from nitrous oxide gas, and Dr. BLACK read a paper on the case before the Society of Anæsthetists. As a local anæsthetic, coryl, a compound of chloride of methyl and chloride of ethyl, has superseded the latter. The administration of oxygen and nitrous oxide gas has been rendered more practicable by the introduction of Dr. HEWITT'S portable apparatus. Several valuable books on dental anatomy and development have been published, TOMES' "Dental Anatomy" (new edition) and DR. G. V. BLACK'S "Anatomie Descriptive des Dents Humaines" being the most important; and papers on the same subject were read by Mr. F. T. PAUL (Development of NASMYTH'S Membrane), Mr. FRANK BENNETT (a Fragment on Dentition), and others. The continued researches of Dr. MILLER of Berlin into the bacteriology of the mouth and the pulp in inflammation are of extreme interest. TALBOT'S work on "The Etiology of Deformities of the Teeth and Jaws" and his paper on the Missing Incisor in Man were valuable contributions to dental science. That hydra-headed disease—or, rather, symptom—pyorrhœa alveolaris has naturally claimed considerable attention, and Drs. XAVIER SUDDUTH and ED. KIRK have endeavoured to establish its connexion with gout in proof of which the latter, in an able paper published in THE LANCET, claimed to have had many successful results by the internal administration of lithium bitartrate, which he used in preference to the citrate. For relieving the excessive pain of acute periostitis small doses of acetanilid have been successfully employed by Dr. HARLAN. Notwithstanding the abuse heaped upon it, bridge-work has more than held its own, probably because its proper place has been more clearly recognised and various methods of repairing it *in situ* have been invented. To avoid the disfigurement caused by large masses of gold in front teeth and yet to provide an indestructible material as a stopping, Mr. G. OLIVER RICHARDS has devised a new form of porcelain inlay. Noteworthy new features in the dental armamentarium have been electricity for motors, mallets, cautery, hot-air syringes, &c. In mechanical dentistry an effort has been made, but only with partial success, to lay under contribution the metal aluminium on account of its strength and lightness, and the merits of fusible metal have been appreciated in every well-equipped laboratory.

Ophthalmology.

Several numerously attended congresses have met in which subjects relating to the eye have been discussed. At the beginning of the year the International Medical Congress at Rome attracted ophthalmologists from all countries, and the debates were not only on interesting subjects but were well sustained by eminent practitioners. At the close of the summer a great gathering of ophthalmic surgeons took place in Edinburgh under the genial auspices of Professor ARGYLL-ROBERTSON, and the members who attended were received with the overflowing hospitality of the north. It proved a very successful meeting. The ophthalmic societies of the United Kingdom, of Paris, and of the Netherlands have held their usual meetings. Amongst the more important subjects that have been discussed were those of intra-ocular therapeutics, which were introduced by a memoir from Dr. CHALLEAUD, who found that chlorine water may be injected without harmful results, and corrosive sublimate in weak solution; but carbolic acid, eucalyptus oil, and creolin, with many other substances, set up violent inflammation and are therefore to be carefully avoided. Corrosive sublimate seems to be really the best antiseptic, though a powerful rival to it exists in mercury cyanide. At any rate, it can be employed advantageously in the form of sub-conjunctival injection, as BOCCHI and TERSON have shown in cases of ulceration of the cornea and of episcleritis. Egyptian ophthalmia, which has been carefully studied by many competent observers, has been the subject of renewed investigation by Professor FUCHS of Vienna, who has arrived at the conclusion that it is not a simple but a complex disease, being, in fact, trachoma combined with acute suppurative conjunctivitis or blennorrhagia, the latter disease being the more dangerous of the two. It appears never to be absent in Egypt, occurring sporadically throughout the year, though it assumes its most formidable frequency and severity during the period of the Nile floods—that is, from August to October. It is remarkable that the gonococcus or microbe of gonorrhœal ophthalmia is constantly present in the discharge. The researches of DOGIEL, BRAUNSTEIN, and LANGENDORFF have to be added to the many that have been made upon the nervo-muscular apparatus governing the movements of the pupil. DOGIEL has operated on cats in preference to rabbits and dogs because their pupils have freer play, because the sympathetic and vagus run separately in the neck, and because a photograph of the two pupils of these animals can be taken simultaneously. The animals were curarised, artificial respiration being maintained; the sympathetic and vagus nerves were divided in the middle of the neck, and an electrical current applied to the central cut end of the sympathetic. A physiological connexion of the sympathetic with the dilator centre of one side and the constrictor centre of the other could be demonstrated; whilst a similar decussating action exists between the vagus, the sciatic, and the auditory nerves and the two centres. BRAUNSTEIN of Charkow has also attacked this question, and published his researches in a well-written treatise; but it is not easy to bring his results into harmony with those of DOGIEL. LANGENDORFF observed that dilatation of a pupil could be produced by stimulation of the third nerve shortly after death. KNAPP has given a powerful impulse to the method of performing cataract extraction without iridectomy by recording the fact that of his last 600 cases he has adopted this plan in 91·4 per cent. The fear of prolapse of the iris appears to be the chief deterrent, whilst a subordinate objection raised by those who practise iridectomy is that it is more difficult to remove the cortical substance of the lens when the iris is left intact. We observe, too, that in the Report of the Manhattan Eye and Ear Hospital simple extraction has been performed seventy-six times against five with iridectomy. The unnecessary proceeding has been suggested by KALT of introducing a suture before the section through the cornea is made in operating for cataract. To the experienced operator this proposal seems to be fraught with danger and to present no advantage commensurate with its difficulty in the rare and exceptional cases in which it might prove useful. The removal of the lens in cases of high myopia is an operation less open to censure. It has been practised by PFLÜGER and FUKALA. One eye alone should be operated on, and the degree of myopia should at least amount to that which requires for its correction a lens of ten diopters. The successful treatment of detached retina is still a desideratum in ophthalmic surgery. Sir WM. BOWMAN entertained no doubt that puncture of the sac was occasionally followed by recovery of vision in the part separated, but it has not proved to be so in many instances. Electrolysis was recommended by GILLET DE GRANDMONT, whose recent death was feelingly deplored by MEYER, but the good result seems to have been limited to the one or two cases he records, whilst others, as VAN MOTT, have obtained no advantage from this method. GRADENIGO and HIRSCHBERG have tried massage of the eye, but the method does not seem to be promising. At the Ophthalmological Congress in Edinburgh LANDOLT warmly advocated the advancement of the yielding or less powerful tendon in strabismus in place of the treatment by tenotomy of the stronger tendon usually adopted. In cases of epiphora, when treatment directed to the more or less completely impervious canaliculi and nasal duct has failed, the plan suggested by BETTREMIEUX may be tried, which consists in applying the fine points of a galvano-cautery to the ducts of the lacrymal gland. The closure of these ducts, he believes, leads to the atrophy of the gland. Another method of treatment for the same disease has been suggested by LAGRANGE, which consists in the application of moderately strong currents of electricity to the canaliculi, which renders the walls more extensible and thus enables the introduction of a Bowman's probe to be more easily effected. KOENIG deduces from experiments made in conjunction with Fraulein KOETTGEN on the freshly extirpated human eye that visual purple serves for the perception of undefined colourless grey; visual yellow (obtained by exposure of the retinal purple to a green light) serves for the perception of blue. Since both visual purple, and hence also visual yellow, are absent from the fovea centralis, this part of the retina should be colour-blind for blue. RUBENS supports KOENIG's view that the fovea centralis is colour-blind for blue by pointing out that fine blue lines in the spectrum cannot be seen by absolute direct vision, but only by indirect vision. The production of colour rings from the revolution of discs

with black and white objects depicted on their surface is difficult to explain, but it has been shown that when black follows white with moderate but not too great velocity a reddish band is seen, whilst on reversing the direction of rotation of the disc, so that black is succeeded by white, a bluish tint is perceived; or if the rotation is rapid the appearance is that of neutral or sage green or drab. The explanation offered by LIVEING is that the duration of the retinal impression for different colours differs, being somewhat longer for blue than for the other colours, whilst, on the contrary, red, when the rotation is in the opposite direction, is perceived sooner than other colours, whilst if the rapidity of rotation be greatly increased the new impression of a white patch will be produced before that of its predecessor has vanished, and there will be an overlapping of impressions, the sensation being that of a neutral tint. The most important works that have been published in the course of the year have been PANAS'S "Treatise on the Diseases of the Eye," which embodies the results of large and long-continued clinical observation and treatment. Other works are DE ST. GERMAIN and VALUDE'S "Practical Treatise on the Diseases of the Eyes in Infants," VIALET'S "Les Centres Cérébral de la Vision." D. STEFAN BERNHEIMER has written an excellent account of the deep origin of the third pair of nerves in man; and J. DE MELLO VIANNA of Lisbon has given the results of his clinical observation of the paralyses of the muscles of the eye; whilst FUCHS and NOYES have published new editions of their valuable treatises. In addition to GILLET DE GRANDMONT, ophthalmic medicine has to regret the loss of CUIGNET, who was the founder of the *Annales d'Oculistique*, an influential French journal of ophthalmology.

Forensic Medicine.

With the exception of the case of the man READ, who was tried, convicted, and sentenced to death at the late Chelmsford Assizes for the murder of his paramour, FLORENCE DENNIS, the year has not been marked by incidents of more than passing forensic interest. History has fairly repeated itself as regards deaths accidental and intentional through the medium of poisons generally and medically in use. A remarkable series of cases arising from carbolic acid poisoning were under treatment at the Royal Free Hospital, where, between June and September, no less than eight deaths were attributed to the agent in question. Five of these were accidental and three suicidal, whilst in no less than seven of the whole number the acid was furnished by the vestry to houses for disinfecting purposes. We had occasion to comment on the danger incidental to the indiscriminate supply of carbolic acid without special indication of the necessary precautions, and at the same time we took the opportunity of suggesting suitable measures to safeguard the public against mischance, which, if not altogether preventable, can assuredly be minimised. We regret that there has been no notable diminution in the sacrifice of life through the employment of anæsthetics. As in former years, chloroform has been responsible for more deaths than the aggregate number referable to nitrous oxide gas, ether, and the mixtures, such as that of Billroth and A.C.E. Whatever may be the final judgment of the profession as to the mode of dying from the influence of anæsthetics, whether it be primarily from stoppage of the breathing or from syncope, we think there can be little doubt that the question of the general employment of chloroform is still one requiring the most careful consideration. An unfortunate case of poisoning by chloral happened at a metropolitan hospital, where an overdose was by misadventure given by the nurse in charge. The unfortunate circumstance formed the basis of our recommendation that instruction in the nature and doses of dangerous medicines should form part of the curriculum of a nurse's training. On several occasions we have discussed the defects of the existing system of death registration and certification, and directed attention to the lines along which the required reforms should run. The taking of the oath with uplifted hand, as permitted by law, has made steady progress, although we regret to say that the method has not always received the support of the judicial bench and the QUEEN'S coroners. Mr. Justice DAY has been singularly hostile to the innovation, prompted, as we imagine, by a desire not to disturb long-continued usage, but ignorant of the real danger lurking in the oft-kissed book. The phrase, "sanitary oath," came as the nemesis of strong bias, though uttered ironically in disparagement of swearing with the uplifted hand. Every thesis has its antithesis, and Mr. Justice DAY'S unfortunate observations received at a recent assize at the Central Criminal Court a rude counter-check at the hands of a brother judge. We refer to the order made by Mr. Justice COLLINS for the destruction of a Bible that had been kissed by a witness alleged to be the subject of syphilis. The viewing of bodies at inquests, now incumbent on coroner and jury, has met with strong opposition; there is doubtless much to be said on either side—indeed, the Coroners' Society have recently issued a forcible protest against the discontinuance of the practice. The criminal responsibility of persons as accessories *before the fact* received a remarkable illustration at the trial of the persons charged with having murdered a woman in Shaftesbury-avenue. The presiding judge instructed the jury that if a person entered into a conspiracy to commit an illegal act, and at the same time he acquiesced, either explicitly or by implication, in the death of a person as the possible result of such crime, he must be considered as an accessory before the fact, even though he took no actual part in the murder. The jury in this case found the man SCHMERFELDT guilty and he was sentenced to death, but the extreme penalty was not inflicted.

A Legal Record.

The legal record of the year 1894 has been by no means deficient in matter of special interest to the medical profession. A question of paramount importance from this point of view came before the Court of Appeal in connexion with the action brought by Mr. ALLINSON against the General Council of Medical Education and Registration to compel that body to restore his name to the Medical Register. The plaintiff had been charged, as our readers are aware, with having tried to defame his brother practitioners and to induce suffering people to refrain from going to them and to come to himself instead. Whether the charge had been proved or not was a question for the Council, and its decision on this point was not subject to review. But the question whethe

such conduct, assuming it to be proved, would be conduct "infamous in a professional respect" within the meaning of the Medical Act was before the Court, and its discussion elicited a definition of the terms which, although put forward "not as exhaustive but as applicable to the case" by the Master of the Rolls, is deserving of the utmost consideration as affording the best available test of what is conduct which will bring the practitioner within the jurisdiction of the Council. The definition, or rather description, originally formulated by the Lord Justice LOPES, is as follows: "If a medical man in pursuit of his profession has done something with regard to it which would reasonably be regarded as disgraceful or dishonourable by his professional brethren of good repute and competency, that would be evidence of infamous conduct in a professional respect." It is to be observed that although a recognisable standard of professional conduct is here contemplated by the Act of Parliament, there is no attempt to force a cut-and-dried system of ethics upon the profession as a whole. It is not too much to say that any such attempt, if made, would inevitably break down. The collective conscience alone is sufficiently discriminating, sufficiently tenacious of its hold on principle and sufficiently conversant with the facts of everyday life to be equal to the task of adjudicating upon the complicated questions of ethics which arise in connexion with medical practice. The concurrent opinion of men of good repute and competency is always the best criterion by which to try an ethical position and this direct recourse to the original source of information is the best possible guarantee for the continued efficiency of the discipline administered by its means. Another case having some points in common with the one just noticed was that of BLOXHAM *v.* the Medical Defence Union, Limited. The institution affected by these proceedings is a purely voluntary organisation, standing in this respect on a footing wholly unlike that of the General Medical Council; but although without official status it fulfils very important public functions, and the dispute which Mr. BLOXHAM brought under the notice of the Court of Chancery had reference to their discharge. His complaint was that in a dispute between himself and another member of the Union the Society had taken sides with his antagonist and was supporting the adverse side with advice and funds. The Union succeeded in satisfying Mr. Justice CHITTY that its course of action had been dictated by proper motives and directed by principles to which no legal objection could be taken; but when the matter came before the Court of Appeal the observations of the judges there led the representatives of the Society to reconsider its position and to withdraw from a discussion which they did not feel able to carry on to their complete satisfaction. The point in question was whether the Society was justified in espousing the cause of one of the parties to this dispute upon his own *ex-parte* statement without affording to the other party an opportunity of showing cause against that course. It was argued with great force that, as it was not the province of the Union to decide controversies but only to take steps for bringing them for the purpose of decision before the courts, it must of necessity proceed as a rule upon an *ex-parte* statement. This argument commended itself to Mr. Justice CHITTY, who based his decision expressly on the ground that "the Council here was not deciding any final question of right," and no word was said in the Court of Appeal to weaken the general proposition. But in a dispute between fellow members of the Society it might be said that there was room for the introduction of a further rule and that it would be fairer, if not necessary, to give to the member impugned an opportunity of stating his case before the machinery of the association could be set in motion against him. This was the view of the case to which the representatives of the association did homage by consenting to abandon the defence of their strict legal position, and we think that in this concession to the principle of *noblesse oblige* they showed a just appreciation of the requirements of the position which their body has come to fill. Of less professional interest, but not destitute of importance, particularly from the point of view of the public, were the proceedings in the action of ALABASTER *v.* HARNESS, in which the plaintiffs succeeded in making a notorious quack responsible for the costs of litigation which he had promoted in the name of another person for the purpose of suppressing criticism of himself and his methods. Over and above the circumstance that the plaintiffs in the action had suffered in consequence of having boldly exposed a system of electrical quackery stands the fact, which we regret to record, that Mr. HARNESS succeeded in securing as his cat's-paw a member of our profession who forgot the dignity of his professional position, and has in consequence suffered seriously. Thus in two ways these proceedings possess a special interest for our readers, and it may be hoped, in spite of flaunting advertisements which have recently appeared in the daily press, that the HARNESS quackery has received in this and other exposures its deathblow. On this point the litigation of the past two years would afford good grounds of confidence were it not that superstitions proverbially die hard. The mention of one piece of quackery brings another to mind, and in that way the proceedings against "HARNESS and Another" suggest those which arose upon appeal out of the conviction of JOSEPH STEEL of Hetton-le-Hole of having infringed the Medical Act by wilfully and falsely taking the title of Doctor of Medicine. The appellant had obtained a diploma from some bogus company which had assumed the style of the General Council of Safe Medicine, and by virtue of this fact was accustomed to adopt the designation M.D. (Bc.), the last two letters having the private significance of "Botanic College." This gentleman, described according to his merits, was a working coalminer, and he seems to have adopted the precautionary measure of adding an explanation of the mystic letters (Bc.) upon his brass door-plate. Unfortunately for him he had been rash enough to use them, and without explanation, in signing certificates which could only be properly signed by a medical practitioner. Thus he had made his fraud complete and demonstrable, with the consequence that he was convicted by the magistrates and the conviction upheld by the Court of Queen's Bench. And thus by the operation of the statute we have arrived at one petty fraud the less. Our legal record this year is not altogether brief and will, we think, prove to be by no means unsatisfactory to our readers.

Anatomy and Physiology.

It is, of course, clear that there is a line at which anatomy and physiology overlap, and it is in this histological region of anatomy that progress has to be recorded. In anatomy, as colloquially understood, there can never be much change from year to year. In the department of biology the advantages and benefits to the community at large consequent upon the establishment of institutions where the aquatic fauna of special regions can be scientifically studied has been felt by other nations than our own. During the autumn of last year a convenient biological institution, with accommodation for ten workers not confined to Norwegians, was opened at Bergen under the superintendence of Drs. APPELLÖF, HANSEN, and BRUNCHORST; and a second station, also admirably appointed, has now been opened on the Christiania Fiord. As the Norwegian fauna is both abundant and varied, interesting results may be expected when the first reports are published. The Americans have established an inland aquatic biological station on the Illinois River at Havana, under the charge of Professor S. A. FORBES and Mr. FRANK SMITH. The field work is done from a cabin boat established in Quiver Lake, appropriately equipped and providing sleeping accommodation for four men. The Scotch station at Cumbrae in Buteshire is making good progress. But it is not alone from the study of biology, regarded from an economical point of view, that good may be anticipated in the investigations which may be carried on in such establishments. They constitute centres in which comparative physiology may be scientifically cultivated, and where the activities of the cell, as exhibited in the lowest organisms, can be carefully investigated. As Professor VERWORN of Jena has justly remarked, it is on these lines that progress in physiology may be anticipated. We have traced all phenomena of change in matter, form, and force back to the point where they disappear in the cell; but of what takes place in the muscle cell, the ganglion cell, the lymph cell, the gland cell, or the egg cell we have not the slightest conception. A judicious note of warning has, however, been raised by Mr. ADAM SEDGWICK as to the formation of too high an estimate of the forms and attributes of the cell, and in particular in regard to the part played by it in the modern theory of development. Led away from facts by the constant reference to the presence of the cell as the anatomical unit and the frequent iteration of its functions in each organ of the body as the physiological factor, observers have failed to see that instead of cells there are, in many situations, as in the mesenchyme tissue of elasmobranchs and in the primary layers of the avian egg, only nuclei connected by a reticulum of a pale non-staining substance, and that in these situations at least no proper cells exist.

The modern methods of staining and mounting specimens for microscopic examination and the use of very high powers, together with improvements in the application of photography to the microscope, have led to wonderful advances in our knowledge of the structure of true cells, especially during the process of mitosis or karyokinesis, and structures that were not even faintly adumbrated in the drawings and descriptions of distinguished histologists a few years ago are now readily distinguished by staining agents which act differently on different constituents of the cell, so that their changes both progressive and regressive can be accurately followed. We might refer in exemplification of these remarks to the beautiful drawings of LAVDOWSKY, to those of RETZIUS, and to those of RAMON Y CAJAL, which in point of delicacy leave little to be desired. Mr. J. E. S. MOORE believes he has shown that the spindle fibres of mitotic cells in the diastral stage of some of the lower forms of life are the optical expression of thickenings in the wall of a membranous cylinder stretched between the chromosomes. A new method of discriminating and numbering the leucocytes of the blood has been described by ELZHOLZ, which consists in adding to specimens of the blood a mixture of glycerine, eosine, and gentian violet. By this means the red corpuscles are destroyed, the neutrophile cells with many nuclei present a violet colour, the eosinophile cells are rendered violet red, inclining to red, and the lymphocytes and transitional cells are blue, whilst a small number remain unstained. Amongst much excellent microscopical work by various observers may be mentioned that of POULTON on the Bill and Hairs of Ornithorhynchus, of BEDDARD on the Oligochæta of Noperal, East Africa, of BROWNE on Monoligaster grandis, of ALLEN on the Nervous System of the Crustacea, and of COLLINGE on the Sensory Canal System of Fishes.

From WEINLAND'S observations on the effects of chemical agents on ciliated epithelium he draws the conclusion, which has an important bearing on the action of medicines, that the physiological action of allied compounds is in intimate relation to their chemical qualities, since the action augments with the magnitude of the molecular weight, a rule that holds good with few exceptions for the motor nerves. Experiments of a somewhat similar character on the nerves have been performed by GRÜTZNER, who has also found that the higher the molecular weight of the salts employed in stimulating nerves the greater is the effect produced, so that sodium iodide acts more powerfully as a stimulus than sodium bromide or sodium chloride; cæsium chloride more powerfully than rubidium chloride and potassium chloride, and barium chloride than strontium chloride and calcium chloride; and it would appear that the sensory nerves respond very differently from motor nerves to chemical stimuli, so that a chemical stimulus applied to a sensory nerve may be inoperative to produce reflex movements, whilst if applied to a motor nerve, first fibrillar, and subsequently tetanic contractions of the muscles supplied by it are produced. These differences are probably due to differences in the nerves, and also to differences in the several organs. His experiments on the production of pain by applying various salts, saline solutions, acids, and alkalies to small self-inflicted cuts are of much interest. In anatomy good work has been done in the careful working out of the relations of the vermiform appendix and of the ureters, both from a surgical point of view. Dr. A. M. PATERSON of Dundee has taken much pains in determining the origin and following out the distribution of the nerves to the lower limbs, and Dr. BENHAM has given an excellent description of the brain in the chimpanzee known to all frequenters of the Zoological Gardens under the name of "Sally." The excellent treatises of RAUBER and TESTUT have been completed. HEIDENHAIN, continuing the researches on digestion with which his name is so intimately connected,

has satisfied himself of the existence of a "physiological driving force," since loops of the intestine of dogs withdrawn from the abdomen and thoroughly cleansed absorb solutions of various salts and serum in a manner and to a degree that is incompatible with the phenomena of simple diffusion. This driving force is lowered by sodium fluoride. The experiments of LOEWY have shown that the interchange of gases in respiration remains comparatively unaltered, notwithstanding great variations in the composition of the surrounding air. Pressure, even when it amounts to 1400 mm. of mercury, the presence of twice the ordinary amount of oxygen, rarefaction of the air or diminution of its oxygen till the tension of that gas in the alveoli of the lungs does not exceed about 0·40 to 0·45 mm. of mercury—all seem to exert but little influence on the elimination of carbonic acid gas or on the absorption of oxygen, and both he and LEHMANN have made interesting researches on the alkalescence of the blood, showing that weak non-diffusible acid bodies exist both in the serum of the blood and still more in the corpuscles, which combine with large quantities of alkali in a form that is capable of being easily destroyed by carbon dioxide. One of these bodies is hæmoglobin, which, therefore, plays an important *rôle* both in regard to the absorption of oxygen and the maintenance of the alkalescence of the blood. The physiology of the carbohydrates and their fate in the animal body have been the object of many researches, but the last word has been advanced by Dr. PAVY, who, as the result of his lifelong labour, believes that sugar in being absorbed from the alimentary canal combines with some peptone to form a proteid, and that the proteids generally have a glucoside constitution. After their entrance into the circulation the proteids may again undergo decomposition or disintegration, leading to the separation, as a cleavage product, of sugar or of fat, the former, if abundant, making its appearance in the urine. The influence of gravity on the circulation has been very generally ignored in physiological work, though the swelling of the hands and feet when the upright position is long maintained sufficiently demonstrates its action. Professor HILL has, however, set the question at rest by showing that the position of the body materially alters the blood pressure in the carotid artery.

In regard to the nervous system, Dr. RAMON Y CAJAL, in his "Nouvelles Idées sur la Structure du Système Nerveux," has brought prominently forward and extended the doctrine of GOLGI that with very few exceptions every nerve cell possesses not only a process of Deiters, or cylinder axis prolongation, but also protoplasmic processes, so that each nerve cell appears to be a minute reflex apparatus having centripetal or cellulipetal and centrifugal or cellulifugal processes, the former being represented by the protoplasmic processes and the latter by the process of Deiters, both of which possess numerous collateral and terminal fibrils. The transmission of impulses in the grey substance is effected, not by the direct continuity of the centripetal fibrils of neighbouring cells, but by contact, or contiguity, or apposition of the processes of one cell with those of another. The main function of the cell is of a trophic nature, and the real generation of nerve force will, perhaps, hereafter be proved to take place in the wonderful plexus formed by the ramification of the cell processes. The difficult question of the functions of the cerebellum has been attacked by Dr. RISIEN RUSSELL, who finds that the hemispheres are independent of each other, and that the impulses generated in each travel either to the spinal cord or to the cerebrum. Professor HILL, experimenting on intra-cranial pressure, has ascertained that under normal conditions it scarcely ever exceeds 10 mm. of mercury. He finds, further, that 20 c.c. of fluid can be slowly driven into the subdural space at the rate of 1 c.c. per minute without harm, but that if a larger quantity be injected an immense rise of arterial pressure takes place with acceleration of the heart's action and inspiratory gasps at long intervals, which are followed by fall of arterial pressure and death. BROWN-SÉQUARD has called attention to the interesting experiments of D'ARSONVAL, which show that the nerves are still capable of acting on muscle and producing rapid rhythmic contractions in it even when it has passed into the condition of cadaveric rigidity; for by employing the myophone it can be demonstrated that the excitability of the nerves persists as long as ten hours after death, whilst BROWN-SÉQUARD himself has found that muscles affected with rigor mortis can contract and relax alternately, though comparatively slowly. The value of massage as a remedial agent is probably due, as BENEDIX has pointed out, to the circumstance that such kneading and pressure cause the muscles to yield up nitrogenous material to the blood, which causes an increase both in the quantity of urine and of urea discharged by the kidneys. That the quantity of glycogen in muscles of the leg is augmented for periods varying from four hours to thirty-five days after section of the sciatic nerve has been shown by VAY to be correct in regard to frogs, cats, and dogs. An observation having an important bearing on the question whether each part of the embryo is destined to form a special part of the adult has been made by J. LOEB, who selected eggs of a sea-urchin and ten minutes after they had been fertilised removed them into sea water diluted with its own volume of distilled water. The membrane of the ovum became flattened and a part of the protoplasm exuded. If the ova were then replaced in sea water each of the two masses of protoplasm, that within and that without the membrane of the ovum, develops into a complete and perfect embryo. In many cases the embryos remained partially coalesced, in others one wasted away, and in yet another set the two embryos separated, and the two underwent complete and synchronous development into the mature animal. He thus produced twins out of one embryo, and in one or two instances triplets were thus produced out of a single ovum. It follows from this that each part of the ovum does not form a special part of the embryo, and LOEB'S observations therefore support those of HAECKEL made many years ago, showing that fragments of the fully segmented ovum of one of the siphonophora may give rise to young and perfect animals. Still more recently some observations have been made by ARNOLD GRAF on the effects of compression on the segmentation of the egg of a sea-urchin, who found that if the egg be placed under pressure till a flat plate of thirty-two blastomeres is formed, and the pressure be removed by the gradual addition of water, separating the cover-slip from the slide, the blastomeres and the nuclei reunite till it becomes converted into a plate of only eight

macromeres and eight micromeres, which may go on to complete development. M. MAREY has, thanks to the extraordinary sensitiveness of modern photographic plates, greatly extended a field he has already made his own. By a method to which he gives the name of "chronophotography" he has obtained a series of images of the same object with intervals varying from $\frac{1}{100}$th to $\frac{1}{2500}$th of a second, and has been able to fix the successive movements of the wings of an insect, which to the naked eye appear only as a mist, and he dwells with complacency on the results that will be obtained by the application of this method to the movements of the heart and other organs. The deaths of Professor HELMHOLTZ and of Dr. BROWN-SÉQUARD have removed from the ranks of the physiologists two men whose works, both practical and theoretical, have exerted a profound influence on medicine for nearly half a century. Of HELMHOLTZ Lord KELVIN has justly said that it may be doubted whether any man living is qualified to speak with the authority which knowledge and understanding can give of the whole of his great and splendid work in physiology, physics, and mathematics. His essay on the Conservation of Energy, written whilst he was only a young army surgeon, would of itself have served to place him in the first rank of physicists, yet we owe to him those researches on tone sensations which have added so much to the science of acoustics, whilst his physiological optics and his invention of the ophthalmoscope have revolutionised our knowledge of the internal diseases of the eye. Dr. BROWN-SÉQUARD, half American, half English, arrived in Paris from the Mauritius with an introduction to M. C. NODIER and a romance in his pocket, which he was recommended—probably judiciously—not to publish. After taking his degree and serving under TROUSSEAU his republican principles led him to seek for work in America, and he became Professor of Physiology in Richmond, Virginia. In 1858 he gave a course of lectures at the Royal College of Surgeons, which long remained the text-book of all teachers dealing with the physiology and pathology of the nervous system. His Journal and Archives of Physiology obtained a wide circulation, and still constitute a mine of curious and interesting physiological and pathological facts. His name will, however, always be chiefly associated with his observations on the effects of division of the sympathetic in the neck; on inhibition; and on the hereditary transmission of artificially induced epilepsy in guinea-pigs. We must not omit the mention, as a tribute of regret, of the names of HYRTL, ROMANES, MILNES MARSHALL, and v. BENEDEN, all of whom did loyal service in different ways to the great subject of biology.

Anæsthetics.

The general outlook remains much the same as when last we wrote. Perhaps the event which will make 1894 memorable in connexion with anæsthetics was the special meeting convened by the Royal Medical and Chirurgical Society to give Surgeon-Lieutenant-Colonel LAWRIE, M.B., an opportunity of stating his views upon the mechanism of death in chloroform poisoning. The presence of Professor GASKELL of Cambridge and of Dr. LAUDER BRUNTON, who, as our Commissioner, watched the experiments made in Hyderabad, gave further importance to the occasion. Surgeon-Lieutenant-Colonel LAWRIE reiterated his well-known views and showed some remarkable diagrams which were from photographs of tracings of cross-circulation experiments, and which demonstrated that the medullary centres of respiration were poisoned and destroyed, and that the animal died, even though no chloroform entered the general circulation. The converse—that, provided the medulla was kept free from chloroform, no dose rendered the heart muscle ineffectual—was also graphically shown. These results were opposed to those of the Cambridge observers, and in the discussion it was pointed out that the diagrams admitted other interpretations than those the opposing speakers placed upon them. In this connexion the recent work of Professor MCWILLIAM[1] has great interest. He finds under chloroform a stage of acceleration of the heart rhythm followed by one of retardation, which persist even when the accelerator nerves are divided. Hence the action is not due to these nerves. When the vagi were divided, even if the accelerator nerves were also cut, chloroform still slowed the heart rhythm become tachycardic through the vagal section. In this case, however, no initial quickening took place. It is inferred that the initial acceleration is a vagal paresis, causing weakening of its inhibitory action. The slowing is not wholly due to the cardio-inhibitory centre, or to local cardiac inhibitory mechanism (occurs after atropinisation). He insists that chloroform acts upon the heart and distinctly slows its rate of beat through an influence upon the intrinsic rhythmic mechanism of the organ.

No new anæsthetic has made its appearance during the year, save coryl, a local application which has been tried in dentistry. Pental, used by SNOW under the name of amylene, has found much favour abroad, although GURTL[2] gives a mortality of 1 in 199 cases. PHILLIP[3] has used it largely in the Kaiser Friedrich Children's Hospital, and pronounces it superior to chloroform. Similarly somewhat inflated eulogies of bromide of ethyl reach us from Germany. The death-rate is put by GURTL at 1 in 3770. KOCHLER,[4] who carefully investigated a case of death under bromethyl, gave heart failure as the cause, and states that respiratory paralysis is less common than cardiac syncope. The employment of chloroform in dental surgery has during the year led to a deplorable loss of life and has provoked some vigorous protests against the practice. A similar heavy mortality from chloroform when employed in the operations of tonsillotomy and the removal of post-nasal growths led to discussions being held at the Society of Anæsthetists and the Laryngological Society. While some advocated using nitrous oxide gas alone, the general feeling appeared to be that that anæsthetic did not in most cases give time for the thorough removal of the growths and could be supplemented without danger or inconvenience by other provided it was given *secundum artem* by a skilled administrator.

Mirror of Hospital Practice.

In reviewing the numerous cases of interest which have appeared in this department of THE LANCET, we are struck by the large number of clinical facts which have been

[1] Proceedings of the Royal Society, vol. liii.
[2] Verhandlungen der Deutschen Gesellschaft für Chirurgie, 23. Congress, 1894.
[3] Zeitschrift für Kinderheilkunde, Band iii.-iv.
[4] Centralblatt für Chirurgie.

recorded in it, and by the importance of them. It will be understood, therefore, that it is a somewhat difficult task to select for special mention the most important cases, for much depends on the point of view from which they are regarded. One of the most striking instances of the successful treatment of fibrous stricture in the lower part of the œsophagus which we published recently will be remembered by our readers. It appears to be only the second instance of the method recorded in this country, but as operative measures have been resorted to in twenty-two cases, it is evidently of more than passing interest. The patient was the subject of fibrous stricture situated near the cardiac end of the œsophagus, the result of swallowing caustic soda six weeks previously. On admission no bougie could be passed, and subsequent attempts were not more successful. Gastrotomy was performed and a gastric fistula established; a few days later a catgut bougie was passed with some difficulty from the mouth, and dilatation rapidly effected from below. An interesting series of seventeen cases of strangulated hernia (occurring within a period of ten days at one of our large London hospitals), illustrative of modern methods of treatment of the condition, attracted deserved attention. Of those submitted to operation for the hernia, eleven in number, all recovered; in most of them a radical cure was effected. In two cases not included in this series the Fallopian tube was found in a hernial sac, an occurrence almost unknown. It is an unsettled point in surgical practice how best to deal at the time of operation with a piece of bowel which has become gangrenous in hernia. Should it be resected at once or secured in the wound and dealt with afterwards? Two cases have appeared as a contribution to this subject; in the first, strangulation of a femoral hernia had been present for nine days and the woman (aged sixty years) was collapsed; partial resection was required, but the patient did not rally from the condition of shock. In the second case the woman, aged forty-five years, had suffered from strangulated femoral hernia for three days, and was also much collapsed; secondary resection of intestine was performed eleven days afterwards, the superficial parts being left open to granulate, and the patient recovered. We recorded in the Mirror of Hospital Practice in 1890 a case of much rarity, one in which symptoms of intestinal obstruction were produced by embolism of the superior mesenteric vessels; this year we have published one in which operation was performed for similar symptoms in a man aged fifty-one years, due to embolism of the inferior mesenteric vessels. It was in the columns of THE LANCET that an account of the first successful operation for intra-peritoneal rupture of the bladder appeared, and from that time many lives have been saved which must inevitably have been lost without operation. The case of a man aged twenty-four years who was submitted to operation this year demonstrates continued success from operation after this formidable injury when prompt treatment follows rapid and accurate diagnosis. In this case the abdomen was opened a few hours after the man had been knocked down, a rupture extending across the whole surface of the bladder covered by peritoneum was found and sutured, not without difficulty, in two layers, muscle to muscle and peritoneum to peritoneum; and the patient recovered. The surgical treatment of impacted calculus in the ureter is quite of recent date. We have published the notes of two cases this year; in one, suppression of urine due to calculous obstruction was treated by exposure of the right ureter at its bladder entrance, where two calculi were found and removed. The left ureter was already obstructed by stones impacted in its middle, and the patient—a very stout man—died from uræmia. In the other case a stone was impacted in the left ureter, about three inches from the kidney; the kidney was drawn out into a lumbar incision, opened, and a probe passed to the calculus; an incision was made through the wall of the ureter and the stone removed. his man recovered. The number of cases successfully operated on in this country for the removal of malignant disease of the cæcum is a limited one; in the case of a woman aged fifty years, who had suffered with symptoms of growth for about six months, complete removal was apparently effected by excision and the continuity of the gut re-established by lateral anastomosis. One of the more unusual results of abdominal injury is illustrated by the case of a youth aged seventeen years who developed a pancreatic cyst after a severe crush; this ultimately subsided after incision and drainage. Penetrating wounds of the chest, in which the pleura alone is injured, are very rare in civil practice, and when they do happen are generally very fatal in their results. In the case of a boy aged two and a half years, who sustained a wound of the pleura on both sides, but recovered under treatment, interesting observations were made as to the behaviour of healthy lung when free access of air is permitted to the pleura. Four cases of traumatic rupture of large arteries—the abdominal aorta, the brachial in two instances, and the common femoral—illustrate recovery from the results of these rare injuries to vessels when unnecessary interference is avoided. In all the cases the main channels below the point injured were without pulsation for a time, their collateral circulation was rapidly established—excepting in the abdominal injury, which proved fatal in a few hours, but the injured limb was much colder than its fellow. Prolonged insensibility resulting from, or determined by, excessive muscular exertion is sufficiently rare to merit special attention; and in case which we recorded loss of consciousness ensued after a ten-mile race. The patient was a trained athlete, but one who had not taken sufficient nourishment before the race. The condition of complete insensibility was accompanied for a time by stertor, and later by convulsive movements, and it lasted for many hours. Recovery was complete. In two cases of tetanus, recorded in the Mirror, tetanus antitoxin was employed. Both the patients, who were young, recovered; but it is not certain that this remedy was the cause of their recovery. It is, however, deserving of a fuller trial in more severe cases.

The Public Medical Services.

There is not much to be said with regard to the naval and military medical services. There have been no great or important changes to be chronicled. The medical officers of the navy appear to be generally contented and satisfied with their present rank and position. As regards the army medical service, however, this can scarcely be said to be the case. We have so recently alluded to the various articles which

have appeared on army medical organisation that the subject must be fresh in the recollection of our readers. That great progress has been made since the introduction of the measure for the unification of the department and the establishment of the station hospital system must, we think, be admitted by every candid observer. Our soldiers are far better lodged, fed, and provided for than they formerly were, and their hygiene comforts generally are better attended to; and the sick and wounded, whether in the hospital or the field, are better provided for than they used to be. We have quite recently had some independent testimony to this effect from Sir EVELYN WOOD, who, in one of his series of interesting Crimean reminiscences in the *Fortnightly Review*, adverts to the remarkable improvement he noticed in our medical organisation during the Nile Expedition of 1884–85. Medical officers are not, however, satisfied with the existing condition of things in this respect, and we think they are quite right. Wars between the civilised Powers of Europe are very different to what they were: they are short and decisive; the numbers of killed and wounded with our present arms of precision and modern systems of artillery are likely to be infinitely greater, and the strain on all departments in the field will, in all probability, be excessive. Everyone must know his place and be ready in it if he is to fulfil the requirements of modern war, which will call forth all the care, skill and intelligent promptitude that can be given. It follows that medical officers must rehearse in times of peace what they may have to do in war unless they are to court failure and disaster; and, it may be added, that those who deny them the opportunities of doing this now will be the loudest in their complaints should these things take place. To quote again from Sir EVELYN WOOD. He says emphatically that administrative efficiency cannot be attained unless the necessary departments are maintained and practised in their duties; and he adds that, while admitting the difficulty of thoroughly testing the efficiency of field hospitals and bearer companies in peace manœuvres, an attempt on a small scale was made at Aldershot this year, of which medical officers made the most they could. The medical services in this matter are actuated by no selfish motive, but by a patriotic and worthy one. They allege that their service is unprepared for war, and that the Government should give them all the opportunities that are required to make it efficient by the mobilisation of field hospitals &c. during autumn manœuvres. As regards the desirability of a closer union between the officers of the medical staff and the men of the Medical Staff Corps by the formation of a Royal Medical Staff Corps, and several other matters of which the medical service is still in need, we have only to say that these points have been referred to and discussed from time to time during the year which is now closing. It also goes without saying that there has been a good deal of excellent work done by the Indian Medical Service, of which we shall probably hear at the present Medical Congress in Calcutta.

Chemistry.

A retrospective glance at the questions which chemists have attacked during the past year shows that it is undoubtedly the region bridging chemistry to physics which has been most explored and which has yielded results of the greatest general interest. Professor DEWAR'S discovery a year or so ago, for example, of a simple means of preserving "liquid air" in large quantities has enabled him since to add an enormous wealth of material to our knowledge of the influence of temperature on chemical action. He has shown that at such low temperatures as boiling oxygen and air (– 200 C.) all chemical action ceases. Metallic sodium or potassium will float upon liquid oxygen with absolutely no chemical enthusiasm; a drop of alcohol staggers and reels to and fro on the surface until, unable to resist the intense cold, it suddenly solidifies, and not only does it become hardened from a purely physical standpoint (for in that condition it is said to rattle like a marble when shaken in a tube), but it refuses to ignite when placed in the Bunsen flame, although at length its refractoriness is overcome as at last it falls like so much syrup from the loop of wire supporting it. *Per contra*, it is interesting to reflect what the chemistry of excessively high temperatures, as that of the sun, must be. And who shall prescribe limits at either end? And who shall say that there does not exist a physical condition beyond the gaseous in the sun and below the solid in extreme cold? Terrestrial chemistry can afford but a feeble notion of what cosmic chemistry must be. On the one hand, it is not difficult to conceive such things as iron, platinum, and gold existing as gas, and on the other, the thin, invisible airs of our globe—hydrogen, oxygen, nitrogen—as liquids, or, it may be, shining lustrous metals. Obviously, chemistry which treats of the properties of bodies requires in the light of recent research a new definition. Possibly with these increased chilling facilities we may soon hear that Professor DEWAR has succeeded in liquefying hydrogen, that obdurate element which has resisted all previous attempts. For this purpose a temperature some 50° C. below boiling nitrogen (– 200° C.) must be obtained, so that when we learn of the liquefaction of hydrogen we may expect to hear also of the near attainment of absolute zero (– 273° C.). Another physico-chemical and important subject which has received a large share of attention from chemists during recent years is the influence which moisture exerts on chemical change. Mr. BRERETON BAKER, M.A., has previously shown that carbon, sulphur, or phosphorus can be heated in a dried atmosphere of oxygen without undergoing combustion. The study has been continued, and now the same chemist finds that dry ammonia and hydrochloric acid, lime and sulphur trioxide, will not combine until moisture is added, when they combine instantly. The investigation of the year is reported to have added two more elements to our list—one gaseous and the other solid (under-terrestrial environment, of course). The alleged discovery of a new element in the air by Lord RAYLEIGH and Professor RAMSAY, announced by them at the meeting of the British Association of Science in Oxford, proved probably the chemical "boom" of 1894. Since that announcement, however, in August these investigators have preserved an unwarranted silence, in spite of criticisms and even doubts expressed by eminent chemists as to the existence of the new element. Professor DEWAR, for instance, at a meeting of the Chemical Society early in the present month, gave an account of some experiments he had made with liquefied air, with a view of capturing the new element, which leaves us not absolutely free from the thought

whether Lord RAYLEIGH and Professor RAMSAY have not, after all, been chasing an *ignis fatuus*.[1] In regard to the other discovery, a new substance was isolated by Dr. BAYER from French bauxite, which would appear to contain a new element, since the reaction it yielded cannot be harmonised with those of any known elements. It appears to act as a metallic acid, like arsenic and vanadium, but further investigations are being made with the view of elucidating its exact nature. The results of some experiments of very great value on the explosive property of coal dust were formulated in the early part of the year at the request of the Secretary of State by Mr. HALL, one of H.M.'s Inspectors of Mines. These experiments, conducted on a practical scale, proved conclusively that coal dust in mines is in many cases more to be feared than fire-damp. It is to be hoped that the preventive measures indicated in this valuable report will be universally enforced, as well as also that "high explosives" will in future occupy the place of gunpowder for blasting purposes, the ignition of which is so often the cause of a big and disastrous explosion. Further light on the structure and chemistry of flame has been thrown by the excellent contribution of Professor SMITHELLS during the year. With the coöperation of Mr. DENT, B.Sc., he has shown what are the changes when a gas of definite chemical composition burns. Thus he gives the pretty explanation that the inner cone of the ordinary cyanogen (C_2N_2) flame is determined by the formation of carbon monoxide (CO), and the outer one by the combustion of the CO so formed. The beautiful experiments shown by Professor DEWAR at an extra meeting of the Chemical Society during the year on fluorescence and phosphorescence give us but another "glimpse into the nature of things." The difference between these two phenomena is explained by saying that, if the molecules of a body vibrate in unison with the waves of light that strike them, no phosphorescence is observed; but if their periods are different a fresh set of waves is produced, which makes the body luminous even after the original disturbance has ceased to operate; phosphorescence and fluorescence are, in fact, relative terms, depending upon the length of time the luminous appearance is observed after outside light has been cut off. The effect of subjection to cold is to lead to a remarkable increase of luminosity, which is what we might expect since phosphorescence increases with the rigidity of the atoms. Bone, ivory, and feathers give a beautiful phosphorescence, pure water hardly any, and milk a strong luminosity. Phosphorescence has also enabled Professor DEWAR to distinguish between the structure of similarly composed compounds. It will be seen, therefore, that although, as has been said, the labours of chemists have on the whole been devoted to physico-chemical subjects during the past year, yet it is a remarkable fact that these investigations have been most fruitful in throwing, as it were, strong side-lights upon the edifice of pure chemistry, so that our knowledge of the structure of bodies has been greatly strengthened and our views on chemical theory placed upon a firmer basis.

[1] Since writing this we learn, as announced in another column, that the newly-discovered gas is to be the subject of a discussion at a meeting of the Royal Society on Jan. 31st, when Lord Rayleigh and Professor Ramsay will present a paper.

Epidemiology and Public Health.

Judged by the general death-rate, the year that is now passing away has been one of unusual healthiness in this country; and even when we come to special diseases, such as enteric fever, which is regarded as one of the most delicate tests of general sanitary conditions, we find that there has been the reverse of excess of death in the statistics of England and Wales as a whole. But it must be admitted, at the same time, that there are special localities where there has been an unnecessary amount of death from this disease, which is so often looked upon as the type of the preventable ones. This is particularly so in a number of districts in the north of England—namely, in Durham and in Northumberland—to which the Registrar-General has again and again called attention. Clearly, some condition or conditions still exist in that part of the country which have during comparatively recent years been overcome or abolished elsewhere, and which lead to the maintenance of a high death-rate from this disease; and it is obviously the duty of the sanitary authorities of the areas in question to remember the advice given many years ago by Sir JOHN SIMON, to the effect that if enteric fever is to be avoided action must be taken to free the air and the soil from fæcal impurities, and to see that water is derived from such sources and conveyed in such channels that its contamination by excrement is impossible. The one essential, indeed, is cleanliness. But it is not only in the north that the conditions laid down are disregarded. One of the most important outbreaks of enteric fever this year is the one at Newport in the Isle of Wight. In this town the water has long been under suspicion, and now, by the aid of bacteriology, it has been found that the public service contains micro-organisms which are derived from the human bowel. This being so, it is clear that the one essential of cleanliness has not been attained in so far as the water-supply of the town is concerned, and it will be obvious that where human excreta can go there also the specific contagion of enteric fever can go. How far the lack of aerial cleanliness, due to faulty sewerage, has contributed to the disease in this special instance is not yet clear, but the danger of deriving water-supplies from geological strata that are liable to receive filth is a fault of the utmost gravity, and one which the Worthing epidemic of last year and the Newport epidemic of this year bring again prominently to the fore. Diphtheria practically continues to maintain its hold upon our population. The relation of this disease to the aggregation of children in our elementary schools is now admitted on all hands; but one interesting contribution has been made to the subject this year by Mr. SHIRLEY MURPHY. In his Presidential Address to the Epidemiological Society he pointed out that there was a distinct and marked reduction in the amount of deaths from diphtheria in the metropolis at the period of the summer holidays; and not only so, but this reduction was mainly accounted for by a lessening of deaths amongst those who are between three and thirteen years of age—that is to say, those who form the school-age group. The fall in the case of infants during the holiday time was only 1 per cent.; in the case of those over thirteen years of age it was 17 per cent.; but amongst those who form the bulk of the school children it reached 25 per

cent. Clearly it is to the control of diphtheria in connexion with school attendances that we must look for one of the means by which this fatal disease may be prevented. Concerned as we are in this portion of our review of the year's proceedings with prevention of disease rather than with its cure, we need only refer incidentally to the use of antitoxin serum as a means of controlling diphtheria. At present the use of the serum is practically limited to the cure of existing attacks of disease in individuals, but it is possible that researches now in progress may indicate a practical use for the serum as a means of preventing the spread of the disease in somewhat the same way as vaccine lymph is used for the control of small-pox. Should this be so, the subject will be a proper one to be dealt with in our Public Health Departments. The small-pox diffusion, which has now persisted for several years, has, unfortunately, by no means disappeared. During the first three-quarters of the present year there were 740 deaths from small-pox in England and Wales; the rate of mortality, it is true, diminished with each succeeding quarter, but in the Midlands there has latterly been a marked increase in the disease. London had eighty-eight of these deaths, and, considering the circumstances of the metropolis, this share is a small one. Indeed, it is a matter for general congratulation that the present methods of dealing with small-pox in over 4,000,000 of people included in the metropolis are so successful. The improvement set in when London small-pox hospitals were abandoned, and it has since been maintained, even in the face of considerable difficulties. The Royal Commission on Vaccination, appointed in 1889, is still silent on the only point which has any medical interest. They found time early in 1892 to make a report on the sixth and last point submitted to them; but as to the "case in favour of vaccination" and the "case against vaccination" which were amongst the earliest points concerning which they took evidence, nothing has yet been heard, although the minds of the Commissioners must long since have been made up on this part of the subject. The outcome is a failure to enforce vaccination throughout the country, such as can never, we fear, be repaired except as the result of a wide and virulent epidemic of small-pox. Cholera has been for a third year widely prevalent on the continent of Europe. Its ravages in Western Russia were again very serious, and they have already led this year to over 26 000 deaths. In Galicia there has also been a widespread and very fatal epidemic which has caused over 7000 deaths; and nearer home, in Belgium, we have witnessed some 1600 cases which have led to a fatality rate of about 50 per cent. of attacks. In fact, in some countries there has been more cholera this year than in 1893; in others, such as Holland and France, there has either been no increase or a marked diminution. During the whole year England has kept its ports open to the commerce of all the infected countries, and our sanitary organisation has fully succeeded in meeting and controlling the half-dozen instances in which the disease has been brought to our shores. The general cholera survey of ports and inland districts, which was commenced by the Medical Department of the Local Government Board, has been maintained through the present year, and by its means, together with the enhanced vigilance of sanitary authorities and medical officers of health, much has been done to perfect our means of defence against this foreign infection. But we have no certainty of success against cholera in those districts where air, soil, and water are still contaminated by excreta and refuse, and notably where our public water-supplies are exposed to risk of contamination by reason of sewage matters. Another stage in the effort to secure international agreement as to the control of cholera was brought to a successful issue at the Paris Conference last spring. All civilised nations, from the United States on the west to Persia and British India on the east, were represented, the two technical delegates sent from this country being Dr. THORNE THORNE and Surgeon-General CUNINGHAM. The Conference dealt almost exclusively with the control of cholera in connexion with the Mecca pilgrimage, and it terminated by an International Convention which our British and Indian delegates were authorised to sign. But the ratification of this Convention has yet to be effected; and this final step depends very much on the action taken first by the Turkish Sultan, and, secondly, by our Indian Government. The former is always difficult to deal with in such matters, and hesitation on the part of the latter will afford the Turk the very opportunity he seeks for procrastination. The legislation of this year includes the Local Government Act, 1894, commonly known as the District and Parish Councils Act. The statute has no direct influence either on public health administration or on the sanitary officials engaged in such work. But the powers conferred on parish councils and, above all, the numerous alterations in areas that become necessary under the Act are certain to influence the work of medical officers of health in some measure. The formation of new sanitary boundaries is always inconvenient, especially when comparison of vital statistics is in question; and such inconvenience is certain to arise in many parts of the country under the multitudinous changes that are in prospect.

Investigations on the Cholera Epidemic, by our Special Correspondent.

The accounts of the cholera outbreak in France during the year 1892 given by our special correspondent when many efforts were made to conceal the facts, received full confirmation at the commencement of this year by the tardy issue of the official French Government report on the epidemic of 1892. It is, however, satisfactory to find, even at this date, that the information, obtained under great difficulties, concerning the earlier outbreaks of cholera in France is acknowledged to have been correct by the highest authorities. In February the official International Sanitary Conference met in Paris to deal with the question of cholera. The sittings of the Conference were held in private, and no reports of the proceedings were given to the press. Nevertheless, our special correspondent contrived to glean some information, and we were able to publish what, under the circumstances, may be considered a very full account of these proceedings. We described the condition of the quarantine island of Camaran, which was one of the subjects debated, and the attack made by M. MONOD in respect to the increased mortality from cholera in India. Then we gave an account of the views sprung upon the Conference by the American delegates, who wished precautionary measures to be applied in European ports similar to those which the French delegates urged ought

to be carried out in Indian ports. These and other details—which, in spite of the closed doors and the secrecy enforced, we were able to publish while the Conference was actually sitting—were ultimately shown to be correct. During the earlier part of the year we gave some illustrations taken on the spot of the insanitary districts of Hamburg, and a cholera map of that town. These investigations were of great practical utility, for they showed that the question of water-supply had not influenced the epidemic in so positive a manner as was generally supposed. At Hamburg, as elsewhere, cholera was more intense according to the nature of the soil, the sanitary condition of the houses, and the financial position of the people. In the numerous districts near the river, built on damp, marshy soil, there were on an average 29·33 cases and 16·17 deaths per 1000 inhabitants. In the worst of these damp, poor districts the deaths from cholera were equal to 27·50 per 1000. But in the higher, drier, and wealthier districts there was an average of 21·65 cases and 10·84 deaths; while in the best of these districts the death-rate from cholera was only equal to 4·48 per 1000. Thus, within Hamburg itself, and where everybody had the same bad water-supply, there was a much greater difference between the various districts than existed between Altona and the best Hamburg district. At Altona the death-rate from cholera was only 2·13 per 1000, and this comparative immunity has been very generally attributed to the fact that the Altona water-supply was filtered, while the inhabitants of Hamburg drank the Elbe water without filtration. But, as our correspondent pointed out, there are many other points to be considered. Altona is for the most part built on elevated ground and on hard rock. Its situation is altogether more healthy than that of Hamburg, and this is proved by the very significant fact that Altona has always been comparatively free from cholera. It is not merely in 1892, when its water-supply was filtered, that Altona escaped from a severe epidemic; but the case was the same as far back as 1832, when Hamburg and Altona were equally badly off in respect to water. The proportion of deaths was then 3·4 per 1000 at Hamburg and 0·5 at Altona. Again in 1866 the deaths from cholera were 5·4 per 1000 at Hamburg and only 1·4 at Altona. At Hamburg, as elsewhere, the condition of the subsoil, bad sanitation, overcrowding, poverty, and insufficient ventilation, or want of open spaces round dwellings, were far more fatal to the population than unfiltered water. Of course, the question of water-supply is very important, but it must not blind us to other issues. From Hamburg to Constantinople is a long stride, yet it was in the latter town that our correspondent found the best appreciation of the necessity of mitigating the evils of poverty if the spread of cholera is to be checked. There the Sultan had very liberally supplied good food to the poor people living in houses where cases of cholera had been reported, and an epidemic which threatened to become very severe was successfully stamped out. The details as to the progressive measures, model hospital, bacteriological institute, and admirably equipped disinfecting stations given by our correspondent, who visited these establishments at Constantinople, must have come as an agreeable surprise to some of our readers; but he also showed that, with respect to domestic and public drainage, everything has yet to be done. The epidemic of cholera at Constantinople will have served a good purpose if it results in the adoption in that town of some scheme for satisfactorily disposing of its sewage.

The Royal College of Physicians of London.

On the day appointed for the annual election of President, Dr. RUSSELL REYNOLDS was confirmed in this high office, to which he had been called a few months previously by the death of Sir ANDREW CLARK. Although during the year there has been comparative freedom from burning questions, the College has under its new President continued to maintain the honour of the profession as jealously and to advance the cause of education as efficiently as under its former zealous leader. Many ethical questions, some of difficulty and delicacy, have been dealt with by the Censors' Board, and it was with profound regret that the College heard a few weeks since of the untimely death of its recently chosen Senior Censor, Dr. OCTAVIUS STURGES. More recently still the College has lost its oldest Fellow, Dr. BISSETT HAWKINS. Early in the year the College passed a resolution concurring in the general tenour of the recommendations of the Royal Commission appointed to report upon the Gresham University Charter and subsequently appointed delegates to confer with delegates from other interested bodies to press the Government to take steps to give effect to those recommendations. The committee of management of the two Colleges has dealt with the subject of the attendance of students at lunatic asylums for clinical instruction, and upon its advice several such institutions whose officers hold teaching appointments in medical schools have been recognised for that purpose. The Moxon Medal was awarded to Sir W. JENNER, a fitting recognition of the invaluable services rendered by this distinguished physician to clinical medicine by the body over which he presided for so many years. The Murchison Scholarship was gained by Mr. P. H. CULLEN of St. Thomas's Hospital. Nor should mention be omitted of the munificent offer by Dr. HERMANN WEBER to found a prize for researches upon tuberculous disease, which was accepted by the College at its last meeting, a committee being nominated to confer with the donor upon the means of carrying his wishes into effect. The laboratories which are maintained by the two Royal Colleges have been this year the means of enabling many important pathological researches to be carried out under the able superintendence of Dr. SIMS WOODHEAD, who has again been appointed director. The work of these laboratories has further been publicly recognised in the handsome donation of the Goldsmiths' Company for the purpose of investigations upon diphtheria, and in the request of the Metropolitan Asylums Board for bacteriological examinations of suspected cases of diphtheria and the supply of antitoxic serum to the hospitals under the control of the Board. Of the more domestic matters in the College there may be mentioned the execution of a memorial portrait of the late President, and the presentation to the College by Lady CLARK of his medical library. The Harveian Oration was delivered by Dr. LAUDER BRUNTON, and was followed in the evening by the Harveian dinner. Sir DYCE DUCKWORTH and Sir W. PRIESTLEY represented the College at the International Medical Congress at Rome, and the like office was filled by Dr. SEATON and Dr. VIVIAN POORE at the Congress

of Hygiene and Demography at Budapest. The Croonian Lectures were delivered by Dr. PAVY, who chose for their subject a New Departure in Connexion with Diabetes; the Lumleian Lectures by (the late) Dr. STURGES, on Heart Disease in Children; and the Goulstonian Lectures by Dr. P. M. CHAPMAN, on the Physics of the Circulation. The Milroy Lectures were given by Dr. HAYCRAFT, on the fascinating topic, most ably treated, of Darwinism and Race Progress; and the Bradshaw Lecture by Dr. THOMAS BARLOW, upon Infantile Scurvy, drew prominent attention to one of the dangers of artificial substitutes for the natural food of infants.

Royal College of Surgeons of England.

During the past year the most noteworthy incidents have been the separate meetings of Fellows and of Members. The Council ventured to call meetings of the Fellows apart from the Members only after having taken the opinion of counsel, and in January they decided to hold two such meetings every year—on the first Thursday in July and the first Thursday in January. The July meeting is intended to take place immediately after the election of members of the Council. The quorum at the meetings has been fixed at thirty, and in this number the members of the Council present are to be reckoned. Special meetings also of the Fellows are to be summoned when it shall seem advisable to the Council, and under the same circumstances meetings of the Members may be called, but they are not to be held regularly. A special meeting of Fellows was summoned in March to elicit the opinion of the Fellows on the Draft Charter of the proposed Gresham University in London, and a general approval of the scheme was expressed; a similar result followed a special meeting of the Members held on the following day, though this latter meeting was hardly a success, as only about ten Members were present. These recently established meetings are not to interfere in any way with the annual meeting of Fellows and Members to receive the report from the Council; for this meeting regulations have recently been approved. It was held this year on Nov. 1st, and a resolution was carried by 25 votes to 8 urging that the Members of the College should have some voice in the election of members of Council, and that a certain proportion of deserving Members should have a seat on the Council. At the July meeting of Fellows approval was expressed of increased powers being given to the Council to deal with cases of misconduct on the part of Fellows and Members of the College. A resolution was also passed in favour of the Council eliciting the opinions of the Fellows as to the mode of election to the office of President.

The changes in the by-laws projected during the year are three in number: by the first, in the election of members of Council, a voting paper will be sent to every Fellow without it being necessary to apply for it, and the voting papers will be received up to the commencement of the election; the second change relates to the powers of the Council over Fellows and Members guilty of misconduct; and the third has reference to an increase of fee for the Licence in Dental Surgery; but all these changes have to go through a tedious process, and have finally to be approved by the Secretary of State for Home Affairs, so at present it cannot be said that the alterations are accomplished facts. In July Mr. J. W. HULKE, F.R.S., was re-elected President, and Mr. REGINALD HARRISON and Mr. ALFRED WILLETT were appointed Vice-Presidents. The following changes have also occurred in the Court of Examiners: Mr. FREDK. TREVES resigned his appointment, and Mr. HENRY MORRIS was elected in his place; Mr. JOHN LANGTON and Mr. T. PICKERING PICK retired at the termination of their periods of office, and Mr. W. ANDERSON and Mr. HERBERT W. PAGE were elected. One Member of twenty years' standing, Mr. CHAUNCY PUZEY of Liverpool, was elected to the Fellowship. The Morton Lecture on Cancer was delivered by Mr. S. G. SHATTOCK, and the Bradshaw Lecture by Mr. OLIVER PEMBERTON. No dissertation was received for the Jacksonian Prize; the subject for this prize for 1895 is Tetanus. Two new prizes have been instituted during the past year. The first is the Walker Prize, founded by Mr. CHARLES CLEMENT WALKER of Lilleshall Old Hall, near Newport, Salop; it is to be awarded every five years "for the best work in advancing the knowledge of the pathology and therapeutics of cancer done either partially or wholly during the five years preceding the year in which the prize shall be awarded." The other prize is the John Tomes Prize, and consists of the income from about £310, handed over to the College by the executive committee of the Sir John Tomes Prize Fund, and is to be awarded triennially for "original or other scientific work done in dental surgery and pathology, dental anatomy and physiology (including histology), or dental mechanics." It has been decided to remove from the list of Members the names of all those who obtained their diplomas before the year 1830 and who cannot be traced. The museum and library have both been largely increased; if arrangements could be made, as we pointed out last year, for the opening of the library on Saturday afternoons the increased facilities would be much appreciated by many Fellows and Members. As to the finances of the College, the income for the last collegiate year has unfortunately decreased to the extent of nearly a thousand pounds; but the expenditure has decreased still more, so that a balance of over £2000 remains.

Meetings of the General Medical Council.

The General Medical Council held its two statutory meetings—that of May and November respectively. The business of the May meeting occupied six days. At this meeting it was resolved that the examiners in surgery of the Apothecaries' Society, who are appointed by the Council, should be appointed for five years only, one retiring annually. The solicitor of the Council reported that proceedings had been successfully taken against one JOSEPH STEEL for using the title M.D. (Bc.) conferred on him by the so-called General Council of Safe Medicine, and that an appeal from this conviction to the Court of Queen's Bench had failed. The subject of so-called diplomas to midwives granted by the Obstetrical Society and other bodies engaged the attention of the Council. The Council declined to regard the issue of such diplomas as "infamous in a professional respect," but passed a resolution giving a warning to certain institutions and urging them to reconsider the terms in which they were framed. Many cases of covering and other professional offences, such as indecent, audacious, or pretentious advertising, were brought before the Council, and the names of seven practitioners were erased. The Final

Examinations of the Conjoint Board of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Ireland engaged the serious attention of the Council. The Examination Committee wished to report the defects of the examination to the Privy Council. But the Council, accepting the assurance of amendment by the representatives of these bodies, resolved meanwhile to postpone report to the Privy Council. The Council at this meeting passed a resolution giving warning to certain dentists that "the issue of objectionable advertisements claiming superiority over other practitioners, or depreciation of them, may easily be carried so far as to constitute infamous or disgraceful conduct in a professional respect." The second meeting of the Council began on Nov. 27th and lasted nine days. In his interesting opening address the President directed attention to the fact that the number of students and practitioners registering in England had not much increased of late years, that they had largely increased in Scotland, and largely diminished in Ireland. The place of registration, of course, does not imply the place of practice. A proposal to add Bacteriology to the subjects of study required was not entertained. One of the most important acts of the Council was its resolution to take proceedings against persons continuing to use the title attaching to qualifications of which they have been deprived by the licensing authorities. The reports of the Examination Committee on the reports of the Inspector and Visitor to the Final Examinations of the Conjoint Board for England and of the Scottish Universities were considered by the Council. The chief fault of the examinations of the Conjoint Board was the short period allowed for the clinical examination of patients. The report on the Edinburgh University passed without criticism. That on the Glasgow University occasioned a very lively discussion on the implied lenity of the examiners in certain of the cases. Dr. GAIRDNER made a very able reply. The Council advanced a step further in its condemnation of the issue of diplomas to midwives by the Obstetrical Society and other bodies, and intimated that from the present date it might be regarded as "infamous conduct in a professional respect." The report of the Pharmacopœia Committee gave rise to a spirited discussion, which ended in its being recommitted. The point in dispute is the advisability of recognising the therapeutical side of pharmacopœial questions by the appointment of a therapeutical editor or in some other way. The whole question is a very important and difficult one, and Sir RICHARD QUAIN, who knows better than anyone else the difficulties, has managed with great tact to conciliate all parties for the present and to let the essential work of preparation go forward. We may be sure that with six months' time for all parties to consider the subject and to consider each other wise conclusions will be reached and the general reputation of the present Pharmacopœia be maintained. The extension of the Pharmacopœia to the colonies and to India is contemplated, and suggests care in regard to sweeping alterations in the scope of the work. The penal cases before the Council were of great importance in regard to the questions involved, and deserve the serious consideration of the profession. In the course of the year about fourteen practitioners have been erased from the Registrar—not, perhaps, a large number out of 30,000, but we should be glad to see it reduced in future years. Other questions before the Council need not now detain us. The evolution of the Council's authority and functions proceeds steadily year by year. It has scarcely yet learned its own powers. These are limited, but they are larger than it thought at first, and may be still more enlarged if good reason can be shown.

The British Medical Association.

After an absence of thirty-one years the British Medical Association met at Bristol and held its sixty-second annual meeting on the last day of July under the presidency of Dr. E. LONG FOX. Sir T. GRAINGER STEWART delivered the Address in Medicine, which took the form of a masterly study of the epidemic of influenza which passed over the world nearly five years ago. "The Art of the Surgeon and how we Train Men to Practise it" was the subject chosen by Mr. GREIG SMITH, who presented the Address in Surgery, an address which was highly appreciated then, and has, we hope, since been pondered by all who practise the chirurgical art. The study of psychology has of late years steadily increased its claim to the attention of men of science, and the address delivered in this Section by Dr. BLANDFORD dealt with the increase of neurotic affections attributable to the greater demands that are made by the requirements of modern life upon the nervous system. The Address in Public Medicine by Sir CHARLES CAMERON was an able *résumé* of the more important discoveries in sanitary science which have been made during the last few years. The meeting was characterised by the thoroughness and care with which the arrangements were carried out and great credit is due to the Bristol authorities for the cordiality with which they received the members of the Association.

The British Association.

No one could have been more popular, and no one could have shown himself more thoroughly conversant with the present position of scientific thought, than Lord SALISBURY, the President of the sixty-fourth meeting of the British Association, which met at Oxford during the second week in August. He dealt with the chief problems that are vexing the scientific mind of to-day in a manner at once comprehensive and clear. One of the most prominent problems of the present day is that with regard to the origin of life, and the President clearly showed our present position with regard to the protyle of the chemist and the protoplasm of the biologist. The triumphs of biology, his Lordship pointed out, had been brilliant in their immediate results, and they promised to be so in the future, but at present no hope could be given of our being able to penetrate the great central mystery of the origin of life. While referring to the great work which bacteriologists had accomplished, Lord SALISBURY reminded his hearers that science had been more skilful in describing the ravages of microbes than in devising means of hindering them, but he paid a graceful tribute to LISTER and PASTEUR, the result of whose labours had been splendid victories over the countless legions of our infinitesimal foes. Lord SALISBURY concluded his address with an admirable summary of the position with regard to natural selection, and expressed the opinion, in the words of Lord KELVIN, that "overpoweringly strong proofs of intelligence and benevolent design lie around us, and if ever perplexities, whether metaphysical or scientific,

turn us away from them for a time they come back upon us with irresistible force, showing to us through Nature the influence of a free will and teaching us that all living things depend on one everlasting Creator and Ruler." In the Chemical Section Professor H. B. DIXON discussed the work of BOYLE, HOOKE, and MAYHOW, and some sensation was caused when Lord RAYLEIGH and Professor RAMSAY announced the discovery of an alleged new element. Amongst the interesting features of the Physiological Section was a demonstration by Professor MCKENDRIC and Professor HERMANN of the use of the Phonograph in Physiology. Altogether, the meeting, which showed an attendance of over 2300, may be said to have been a successful one.

The Eleventh International Medical Congress.

The greatest medical event, in some respects, in the history of the year was the Eleventh International Medical Congress at Rome, ably presided over by Professor GUIDO BACCELLI, Minister of Public Instruction. In the number of its members (over 8000) and in the number of communications proffered it was indeed great and probably unprecedented. Our own country, in all its divisions, was well represented; anatomists, physiologists, consulting physicians and surgeons, and general practitioners were present in great force. The representatives of the colonies and of India and of all foreign nations crowded the City of the Seven Hills to excess. The occasion will not be forgotten by those who were members of the Congress. The King and Queen of Italy were present at the opening of the Congress, being supported by Signor CRISPI and the leading statesmen of the country. On this occasion the United Kingdom was represented, as on so many previous ones, by Sir WILLIAM MAC CORMAC. The meetings of the Congress were held at the Policlinic—a new hospital, then unfinished, splendid in its proportions and its accommodation, but still inadequate for the crowds by which it was besieged day after day. It is too soon even yet and in the absence of the Transactions to form an estimate of the scientific value of the Congress. It would not seem that the Congress will be marked by any startling announcement of discovery or research, but as a meeting of great leaders of research and thought it has never been surpassed. The hospitality of the President and the profession was great. But the arrangements were characterised by want of organisation and by want of some controlling central power to keep the proceedings within well-defined limits and make them generally intelligible and interesting to the polyglot mass of practitioners who had gathered together from all parts of the world. It is not too much to say that this want was so deeply and widely felt as to make it certain that if in future such congresses cannot be brought under more control and organisation they will cease to be taken seriously by those who have anything important to announce. It is only fair to add that, all defects of the Congress notwithstanding, members enjoyed themselves immensely and will look back to their visit to the Congress as one of the events of their lives. We may go further and say that the very interest of the place militated against the success of the Congress. An unusual proportion of the members went to see Rome rather than to hear discussions in a foreign language. And they were not disappointed. They were delighted with the hospitality they received, and they saw and heard enough to satisfy them that the lights of medical science burn brightly in Italy as elsewhere. We had the pleasure of publishing at the beginning of the Congress an ode to the President by a respected and distinguished member of the profession who has made his home in Italy, J. P. STEELE, B.A., M.D. Edin. We may perhaps be pardoned for recording the fact that the office which THE LANCET was able at an early stage to secure at the Congress proved to be of some service as a useful centre for English-speaking members and many others.

The University of London.

In January the Commissioners appointed to consider the Draft Charter for the proposed University in London issued their report; but no action thereon has as yet been taken by the Government. The chief recommendations of the Commissioners are that there should be one University with teaching functions confined to London, and that the existing University should be reconstructed so as to carry on this work without interfering with its present duties, and that University College, King's College, Bedford College, the Royal College of Science, the City and Guilds of London Institute, certain theological colleges and colleges of music, and the London medical schools, should be at once admitted as schools in the University. The students are to be divided into those attached to these institutions, and hence called internal students, and unattached or external students. The examinations for the internal students are to be arranged by the Academic Council, and those for the external students by a board specially appointed for that purpose. The final examination for the degrees is either to be the same or to represent the same standard of knowledge, "and will be identical, so far as identity is consistent, with the educational interests of both classes of students." To carry out these suggestions the Commissioners recommend the following as the constitution of the future university—viz., a Senate composed of the Chancellor and sixty-five other members; an Academic Council, consisting of the vice-chancellor and fifteen other members; Faculties of Arts, science, medicine, law, theology, music, and Convocation. The faculties are made up of professors and teachers, and will elect the Academic Council, which will regulate teaching, examinations, and discipline, and in certain cases advise the Senate. The Senate is to be composed of twenty-two teachers, eight Crown nominees, nine members of Convocation, and twenty-six representatives of various public bodies and institutions. It is obvious that the chief power in the new University will not be in the hands of this complex and unwieldy Senate, but of the small body of teachers in the Academic Council. It is proposed that these recommendations should be effected, not by Charter, but by legislative authority, and by the appointment of a Commission with statutory powers. A majority of the Senate of the present University of London, including the Chancellor, Lord HERSCHELL, are understood to favour these changes, and most of the public bodies interested in the question have expressed a general approval of the Scheme, and will join in applying for the appointment, under certain conditions, of a Statutory Commission. If such a Commission be permitted to vary many details in the scheme of the

Commissioners a satisfactory solution of this important problem may perhaps be found, but if the report is to be carried out as it stands we fear that no benefit whatever will result to the London medical student. However, as Lord ROSEBERY has consented to receive a deputation of those interested in the question about the middle of January, we shall then have some knowledge of the views of the Government.

The Medical Societies.

This year, as last, the plan has been pursued of grouping together the papers brought before the Medical Societies under their respective scientific headings. The feature of the year has been the great development of the clinical evenings. The Clinical Society has now followed the example of its elder sister the Medical Society, and has set apart certain entire meetings for the exhibition and discussion of living clinical cases. Many other societies in London and the provinces have done the same. These meetings have attracted by far the largest audiences, and thus in this respect the experience of the post-graduate school is confirmed—namely, that to the busy practitioner the meeting that appeals most strongly to him is not an academic lecture, but a practical demonstration from the life of the phases of disease. Mr. BRYANT'S address on Some Subjects of Public and Professional Interests was a well-timed contribution dealing with the working of infirmaries and clubs and other matters of everyday interest to practitioners. The inaugural address of Sir WILLIAM DALBY at the Medical Society of London on the Pleasures of Medicine and Surgery was a scholarly thesis which will be read with pleasure by a wider circle than the Fellows of this society. Dr. BANNING discussed the vexed question of Medical Titles from the general practitioner's standpoint. In the field of medicine we have first to notice a paper by Dr. DICKINSON on Albuminuric Ulceration of the Bowels, giving a number of cases additional to those published in the Croonian Lectures for 1876, presenting a total of twenty-two examples in an experience of forty years. The lesion usually presented itself late in the course of renal disease, and often brought about a fatal issue by means of perforative peritonitis. Dr. HENRY RUSSELL showed twin brothers affected with Hereditary Chorea. Dr. ABRAHAM recorded his experience of the Treatment of Certain Diseases of the Skin with Thyroid Gland. Many other papers on this subject were read during the year. Dr. SOLTAU FENWICK related two cases of Acute Phthisis following Destruction of the Mucous Membrane of the Stomach by Corrosive Fluids. Mr. C. B. LOCKWOOD communicated a valuable paper on the Transient Aphasia occurring during the course of Syphilis. Mr. BURGESS read a paper on a case of Malignant Endocarditis, which differed in its symptoms from the description of recorded cases. Dr. D. DRUMMOND opened a discussion on Typhlitis, commenting on various points in the anatomy and histology of the appendix. A case of Cancrum Oris in Typhoid Fever was described by Dr. H. T. BEWLEY. Drs. VACHELL and PATERSON described some cases of Acute Nephritis from Sewer-air Poisoning. Dr. WASHBOURN contributed a paper on cases of Pleurisy caused by the Pneumococcus, with constitutional symptoms resembling those of pneumonia. Dr. WILBERFORCE SMITH showed a case of Phthisis treated successfully with Inhalation of Carbolic Acid by means of a "Hat-box" Inhaler. Dr. CROCHLEY CLAPHAM, in a paper on Insomnia, advocated the use of simple remedies in sleeplessness. Dr. LEWIS JONES read a paper on the Electrical Treatment of Infantile Paralysis, tabulating his conclusions under eight heads. He insisted on the importance of adopting this treatment in every case of infantile paralysis. Dr. CARTER related a case of Extensive Ulceration of the Colon in Association with Typhoid Fever. Dr. WETHERED read a paper on the Diagnosis of Diphtheria by Bacteriological Cultures. In a paper on Milk Diet in Bright's Disease Dr. RALFE strongly advocated that this diet, which proved beneficial in a large number of cases, should not be abandoned without an investigation into the causes of failure in any given instance. A discussion on Influenza was introduced by a thoughtful paper from Dr. SAMUEL WEST, bringing our knowledge on this subject up to date. Dr. WHEATON contributed a paper on Certain Affections of the Mucous Surfaces and their relation to Diphtheria. Dr. MACLAGAN read a paper on Some Cases of Myocarditis. Professor FINLAY contributed Notes of a Case of Abscess of the Spleen. Dr. NORMAN WALKER discussed the subject of the Common Varieties of Lupus Vulgaris and their Treatment. A case was related by Dr. CHURTON in which a Pancreatic Cyst was associated with Diabetes. Dr. SANSOM contributed a Review of Cases manifesting Pain at the Heart, or Morbid Acceleration of the Heart's Contractions subsequently to Influenza. Dr. V. POORE discussed in a valuable paper the Relation of Slight Degrees of Albuminuria to Life Insurance. The Results of the Hyderabad Chloroform Commission were brought before the Royal Medical and Chirurgical Society in an address by Surgeon-Lieutenant-Colonel LAWRIE. Dr. LAURENCE HUMPHRY gave an account of some observations he had made on the Plasmodia of Malarial Fever; and several Successes in the Treatment of Myxœdema by the Thyroid Extract were recorded during the year. Dr. JULIUS ALTHAUS read a communication on Hypochondriasis and Nosophobia. The subject of Intra-cranial Aneurysm in Young Subjects was discussed by Dr. ROSE BRADFORD and Dr. HALE WHITE. Mr. J. E. PAUL contributed a paper on Acute Pancreatitis. A paper by Dr. RALFE on Recent Theories of Gout bore especially on the pathology of uric acid. Dr. GEORGE HERSCHELL read a paper on the Mode of Action of Iron and the Relative Value of its Salts in Anæmia. A case of Actinomycosis extensively involving the Skin was dealt with by Dr. J. J. PRINGLE. Mr. COLIN CAMPBELL gave a valuable communication on the Treatment of Respiratory Affections by means of Large Medicinal Injections through the Larynx. The subject of Idiopathic Dilatation of the Sigmoid Flexure was brought forward by Dr. HERRINGHAM and Mr. BRUCE CLARKE. Dr. FREDERICK TAYLOR reported favourably on the Use of Inhalations of Oxygen in Splenic Leukæmia. Dr. SYMES THOMPSON in an able paper discussed the subject of Gout and Life Risks. A paper on the Influence of Heredity in Phthisis by Dr. SQUIRE raised an interesting discussion on this important question. Dr. BAMPTON contributed notes of a Fatal Case of Granular Kidney in which Complete Anuria lasted for ten days without convulsions and without any obstruction in the urinary passages. There have been many discussions during

the year on the Nature and Treatment of Diphtheria, the most important of which was that recently initiated at the Clinical Society by Drs. WASHBOURN and GOODALL and Mr. CARD, who gave the details of a Series of Eighty Cases treated with Diphtheria Antitoxin. So far experience of the action of this new remedy tends to confirm the favourable opinion formed of it, the result apparently depending in great measure on the early exhibition of the serum.

Under the head of Surgery a communication of much importance came from the pen of Mr. FREDERICK TREVES in his three admirable Lettsomian Lectures on the Nature of Peritonitis, delivered before the Medical Society of London. Mr. J. HUTCHINSON, jun., gave the particulars of a case in which Abdominal Section was performed for Acute Intestinal Obstruction due to Multiple Hydatid Cysts, the cysts being removed and recovery resulting. Mr. WILLIAM ANDERSON related a case of Multiple Ankylosis occurring in a patient the subject of acute peripheral neuritis and associated with muscular and cutaneous atrophy in the lower extremities. Dr. W. J. TYSON communicated particulars of a case of Suppurating Hydatid of the Liver opened through the Chest Wall. In a paper on the Treatment of Cancer of the Breast by Mr. WATSON CHEYNE, he advocated extensive removal of the breast and of the whole of the axillary glands and fat. A case of Traumatic Sarcoma of the Pericranium was shown by Dr. RAMSAY, the growth being observed six weeks after a blow. Mr. ARTHUR CHANCE read a paper on the Operative Treatment of Enlarged Prostate, urging early interference in certain of these cases. In a paper read before the Liverpool Medical Institution Mr. G. E. WALKER advocated early ligature of the Carotid in Pulsating Exophthalmos. Mr. GREIG SMITH discussed the So-called Spontaneous Disappearance of Solid Abdominal Tumours. Three cases were related in which the cause was held to be a heaping-up of embryonic protective cells around a minute fistulous opening into the intestine. Mr. BALLANCE showed two cases of Fractured Patella treated by Immediate Incision and Wiring. Mr. MCARDLE argued that the middle stratum of the abdominal wall was the essential one to secure in completing operation for Ventral Hernia or after Laparotomy. Mr. CLUTTON read a paper on three cases of Endosteal Sarcoma of the Radius. Mr. MALCOLM related a successful instance of Nephrectomy for Malignant Tumour in a patient twenty-three months old. Mr. HUTCHINSON read a paper on School Ophthalmia, alluding to its recent appearance in middle-class schools. Mr. G. A. WRIGHT advocated the anterior transverse incision in dealing with Disease of the Ankle-joint. Mr. HARRISON CRIPPS read a paper on four cases of Suppurating Ovarian Cysts which communicated with the rectum. Mr. ALBAN DORAN dealt with the subject of the Feeding of Patients after Abdominal Section, holding that in old and feeble patients the starving system was dangerous. Dr. KENNETH MACLEOD read a paper on Nerve Stretching and Splitting in Localised Interstitial Neuritis. Mr. BRYANT described two cases of Intussusception of the Large Intestine due to the presence of Papillomatous Growth successfully reduced by the introduction of the hand into the rectum after removal of the growth. Mr. ARBUTHNOT LANE gave an account of Multiple Epitheliomatous Formations occurring at different periods in a patient who had suffered from Psoriasis from Infancy and who had for thirty years been treated with Fowler's solution. Mr. JOHN LUNN described a case of Fungating Syphilitic Growth of the Penis. Professor ANNANDALE, in opening a discussion on Intra-cranial Surgery, gave a concise epitome of our progress in this field. A paper on Fibrous Stricture of the Œsophagus was communicated by Mr. KENDAL FRANKS, who advocated gastrostomy and dilatation from below. Dr. W. W. ORD and Mr. WATERHOUSE placed on record a successful case diagnosed as Tuberculous Meningitis treated by trephining and drainage of the subarachnoid space. Mr. THOMAS H. MORSE related a case of Ruptured Gastric Ulcer successfully treated by Abdominal Section and Suture. Mr. LOCKWOOD described a case of Strangulated Hernia treated by Resection and Immediate Suture of Intestine. Mr. BATTLE gave the details of three cases of Extra-dural Hæmorrhage submitted to operation, with two recoveries. Dr. CAYLEY and Mr. BLAND SUTTON related a case of Perforation of the Bowel in Typhoid Fever treated by washing out the peritoneal cavity and excising the ulcer. Interesting cases of Intestinal Obstruction by Band surgically treated were related by Messrs. PERCY DEAN, J. HUTCHINSON, jun., and BLAND SUTTON. Mr. HURRY FENWICK gave particulars of a case in which he resected a portion of the left lateral wall and base of the bladder for Recurrent Epithelioma. Mr. J. E. PLATT contributed a statistical paper upon the subject of Fistula in Ano. A thoughtful paper on the Scope of Orthopædics in the Treatment of Deformities was read by Mr. LUKE FREER. Mr. LUCY discussed the nature and treatment of Tuberculous Arthritis. Mr. LENTAIGNE detailed the history of three cases of Popliteal Aneurysm successfully treated by Ligature of the Femoral Artery after compression and flexion had been tried without success. Mr. C. B. KEETLEY exhibited two cases of Retained Testis which illustrated a new mode o operating. Mr. W. A. LANE advocated a more effectua and scientific method of Treatment of Fracture of the Tibia and Tibula than that in common use. A case of Œsophagotomy for Impacted Tooth-plate was related by Mr. ARTHUR WILSON. A case of Extra-peritoneal Vesical Hernia was described by Dr. ERNST MICHELS. Mr. DAVIES-COLLEY read a paper describing a modified operation for Cleft of the Hard and Soft Palate. Mr. BATTLE related a case of Traumatic Rupture of Intestine without External Wound. Mr. MACREADY described an Apparatus which he had invented for use after Inguinal Colotomy. Mr. BARWELL advocated a new method of making Extension in Fractures of the femur. A case in which Intestinal Obstruction was due to Constriction of the Bowel after Appendicitis was described by Dr. LAUDER BRUNTON and Mr. WATSON CHEYNE. Mr. SILCOCK recorded a successful operation for Acute Intestinal Obstruction and Peritonitis. Mr. EDWARD COTTERELL gave the details of two cases of Uretero-lithotomy, and he discussed the treatment when the stone was impacted at varying points in the ureter. Mr. BLAND SUTTON read a paper on Cancer of the Colon and its Treatment. Dr. DIVER advocated the use of Chlorine Gas in the Treatment of Chronic Ulcer of the Leg. Dr. LOGAN TURNER, in a paper on Displacement of the Semilunar Cartilages of the Knee-joint, advocated in most cases removal rather than suture of the displaced cartilage. Dr. JAMES TAYLOR read a carefully

prepared communication on Optic Neuritis in relation to Cerebral Tumour and Trephining. Mr. VERRALL, in an address upon the Aspects of Modern Surgery, said that the keynote of progress to-day was preventive surgery. Mr. STRETTON related a case of Intussusception in a male aged twenty years successfully treated by laparotomy. Mr. EVE read notes of a case of Tuberculous Lymphangitis following a Sore on the Finger. Dr. GEORGE MURRAY and Mr. W. G. RICHARDSON showed a patient after successful removal of a Sarcoma from the Brain. Mr. LOCKWOOD related some successful cases of Diffuse Septic Peritonitis treated by Laparotomy. Mr. MARMADUKE SHEILD read a paper on Ulcerations of the Duodenum, with special reference to latent perforating ulcer of that part of the intestinal canal. Some further cases of Perforating Ulcer were published by Mr. LOCKWOOD. Mr. W. SQUARE discussed the treatment of Angular Spinal Curvature. Dr. HECTOR MACKENZIE and Mr. F. C. ABBOTT described a case of Subdiaphragmatic Abscess communicating with the Right Pleura successfully treated by Resection of Rib and Drainage. Mr. BARLING showed a case to illustrate a mistake in diagnosis between Renal Stone with Perinephric Abscess and Vertebral Osteitis. Mr. GOODSALL brought forward a case in which the Cæcum had been opened for Intestinal Obstruction caused by Cancer. Mr. CRIPPS showed a successful case of Anastomosis of the Small Intestine. Mr. CLUTTON exhibited a case of Dislocation of the Humerus with Fracture at the Surgical Neck, which he treated by cutting down, replacing the head of the bone and pegging the fracture together. A case of Excision of the Scapula for Enchondroma was exhibited by Mr. WATSON CHEYNE. Mr. JACOBSON described a successful operation for Bullet Wound of the Parietal Lobe of the Brain. Mr. TREACHER COLLINS discussed the Relation of Lamellar Cataract to Rickets. Mr. LITTLEWOOD gave notes of two cases illustrating the Treatment of Aneurysms of Arteries of the Extremities by Extirpation of the Sac. Mr. W. A. LANE gave the results of a year's experience of the Use of Sulphur in Surgery. Dr. BEEVOR and Mr. BALLANCE brought forward a case of Subcortical Cerebral Tumour treated by operation. Mr. PEARCE GOULD read a paper upon Suture of the Urethra after Rupture and External Urethrotomy. Sir WILLIAM STOKES gave the details of a series of cases of Cancer of the Jaws, Tongue, and Mouth. Mr. HEDLEY BARTLETT related a case of operation for Pyonephrosis following an Injury. Mr. GIFFORD NASH described six cases of Nephrectomy performed at the South Devon Hospital. Mr. GEORGE LAWSON described a series of five cases of Plastic Cellulitis of the Orbit, four of them unaccompanied by suppuration. Mr. THELWALL THOMAS drew attention to the frequency of occurrence of Hydrocele after Injection, and advocated an extensive excision of the parietal tunica vaginalis. Mr. KENDAL FRANKS, in a paper on Adenoid Vegetations of the Naso-pharynx, advocated the administration of chloroform and thorough removal of the growths with Gottstein's curette.

The Pathological contributions during the year were numerous and valuable. Dr. LEE DICKINSON showed a specimen of Tumour of the Uterus which, commencing as a fibro-myoma, appeared to have become sarcomatous. Details of a case of Epithelioma of the Scrotum occurring in a tar-worker were communicated by Mr. D'ARCY POWER. Mr. DAVIES-COLLEY showed the Bones of a Knee-Joint affected with Syphilitic Chondro-arthritis. Mr. WALLIS exhibited a specimen of Sacculated Hypertrophied Bladder which had ruptured through a saccule into the porta vesicæ. The question of the Frequency of Floating Kidney was discussed by Mr. STALKER, and the opinion was expressed that it was much more common in practice than its comparative rarity on the post-mortem table would seem to indicate. Dr. FRED. J. SMITH showed a specimen of Diseased Vermiform Appendix in which there was a curious absence of symptoms and signs during life of what had evidently been a typical example of recurrent appendicitis. Two specimens of Congenital Syphilitic Cranial Deformity in Infants associated with Fusion of the Fingers and Toes were shown by Dr. WHEATON. The cause of the fusion was probably compression by amniotic adhesions. Dr. KANTHACK showed a specimen of the Pyæmic Form of Actinomycosis in Man. Dr. VOELCKER exhibited an Aneurysm of the Aortic Valve occurring in a child eighteen months of age, and due probably to fatty degeneration. Dr. KNOX exhibited a specimen of Congenital Atresia of the Small Intestine. There was complete interruption of continuity of the canal about the lower part of the jejunum. The pathological conditions found in a case of Portal Thrombosis were described by Dr. W. G. SMITH. Dr. RUBERT BOYCE gave a concise summary of the seven chief questions presenting themselves for investigation in the study of Cancer. A specimen of Exfoliation of the entire Mucous Membrane of the Bladder was exhibited by Mr. HURRY FENWICK. Dr. FLETCHER BEACH read a paper on Sporadic Cretinism, based on an analysis of 116 cases. Mr. JAMES BERRY showed a Sigmoid Flexure which had become dilated, ulcerated, and perforated as the result of simple chronic constipation. A specimen of Syphilitic Sclerosis of the Skull was shown by Dr. ELWIN HARRIS. An interesting discussion on Rodent Ulcer followed the exhibition of cases by Mr. EDGAR WILLETT, Mr. BOWLBY, and Mr. EVE. A case of Tumour of the Pons Varolii was exhibited by Mr. H. H. TAYLOR. The Left Hemisphere of a Brain from a case of Aphasia was shown by Dr. ORD and Mr. SHATTOCK. Mr. HERBERT DURHAM contributed a paper on the Persistence of the Thyreo-glossal Ducts, with remarks on Median Cervical Cysts and Fistulæ of Congenital Origin. A well-marked case of Osteitis Deformans was exhibited by Dr. GUTHRIE. Mr. C. SYMONDS showed a specimen of Small Squamous-celled Carcinoma of the Bladder involving the entire length of the Urethra. Mr. NEWTON PITT showed three specimens of Hydronephrosis due to Aberrant Renal Vessels. A specimen of Tuberculous Ulceration of the Large Intestine was exhibited by Dr. NORMAN MOORE. Specimens of Alcoholic Degeneration of Nerves were shown by Dr. TOOTH. Dr. WALTER CARR gave an analysis of 120 Necropsies to illustrate a communication upon the Starting Points of Tuberculous Disease in Children. Mr. D'ARCY POWER showed a specimen of a Congenital Pelvic Cyst growing along the left side of the rectum of a girl aged two months. An important research on the Influence of Different Kinds of Soil on the Comma and Typhoid Organisms was communicated by Dr. R. DEMPSTER. Mr. JACKSON CLARKE brought forward some observations on

Variola and Vaccinia. Dr. F. H. HAWKINS exhibited a specimen showing Extensive Peri-renal Hæmorrhage. Mr. TARGETT gave an instructive demonstration of Congenital Renal Tumours. A paper by Dr. GOODALL was read on Perforation of the Soft Palate in Scarlet Fever. Dr. HEWLETT contributed a paper on Bacteriology in its Practical Aspects. Mr. BOWLBY showed an Epitheliomatous Cyst of the Neck probably originating in a branchial cleft. Mr. SHATTOCK discussed the Etiology of Renal Adenoma in Children. Dr. HARRIS introduced a discussion on Rabies by reading notes of two cases which occurred in his practice, one of the paralytic and the other of the convulsive form. Dr. HERRINGHAM discussed the Pathology of Subdural Hæmorrhage in Pernicious Anæmia. Mr. F. T. PAUL showed a peculiar Scirrhous Tumour of the Axilla originating in the glands, having a structure intermediate between sweat glands and breast. The subject of Megalo-cystic Kidneys was dealt with in a paper from the pen of Dr. PYE-SMITH. Dr. SNOW showed a Chondro-sarcoma of the Humerus removed by amputation at the shoulder-joint. Mr. SHATTOCK recorded the results of a careful examination of a Tumour of the Palate, and gave the results of an inquiry as to whether the palatine and labial glands of man were salivary. Mr. GOLDING-BIRD read an account of a Dermoid Cyst which projected into the rectum like a polypus. The subject of the Origin of Malignant Tumours connected with the Hypophysis Cerebri was discussed by Mr. BEADLES and Mr. TARGETT. Mr. JACKSON CLARKE made some observations on the Repair of Tendons. Dr. ROBERTSON showed a Pressure Pouch of the Pharynx, the origin of which he was unable to account for satisfactorily.

The department of Obstetrics and Gynæcology was not inactive. A communication from Dr. HERMAN on the Association of Bright's Disease with Pregnancy and Labour contained the conclusion that the pregnant woman was specially liable to at least two kinds of renal disease. Dr. GOW published a note on Vaginal Secretion, which was alkaline at first, but became acid from decomposition. He likewise read a paper on Eight Cases of Vaginal Hysterectomy for Cancer. In a paper on the Use of Ergot Dr. REMFRY pointed out that as a general hæmostatic it was not satisfactory, and discussed the dangers of its administration during labour. Mr. EASTES gave particulars of a case of Partial Strangulation of a Uterus by a Broken Pessary. Dr. PURSLOW showed an Ovarian Cyst with Twisted Pedicle, which had led to partial gangrene of the cyst wall. Dr. DAKIN read a paper on the Modern Methods of treating Post-partum Hæmorrhage. Dr. LOMBE ATTHILL read a paper on Vaginal Hysterectomy, giving three instances of the value of this operation in cancer originating in the interior of the uterus. He subsequently recorded an interesting instance of Subsidence of a Uterine Fibro-myoma. Dr. R. P. HARRIS read a paper entitled "A Plea for the Practice of Symphysiotomy, based upon its record for the past eight years." Dr. AMAND ROUTH read a communication on cases of Associated Parovarian and Vaginal Cysts formed from a Distended Gartner's Duct. Dr. BRAXTON HICKS communicated a paper on Intermittent Contractions of Uterine Fibromata and in Pregnancy in relation to Diagnosis. Mr. WHERRY read notes of a case of Inverted Uterus of twelve months' duration reduced under an Anæsthetic by Manipulation. Dr. THOMAS MORE MADDEN read a paper on the Etiology, Prevention, and Treatment of Puerperal Septicæmia. Dr. REMFRY, in a paper on Ligature and Division of the Upper Parts of both Broad Ligaments, compared this with removal of the appendages for arrest of menstruation. Dr. ARTHUR GILES read a paper upon the Temperature after Delivery in relation to the Duration of Labour, based upon an analysis of 600 cases of normal labour. Dr. CULLINGWORTH brought forward three cases of Pelvic Inflammation attended with Abscess of the Ovary. Dr. ROBERT BARNES gave an address on General Physiology and Pathology illustrated by the Study of Menstruation and Gestation. Dr. FARRAR, in describing a New and Speedy Method of dilating a Rigid Os in Parturition, attributed the rapid dilatation to the action of cocaine. Dr. W. S. GRIFFITH emphasised the Importance of a Decidual Cast as Evidence of Extra-uterine Gestation. Dr. THOMAS WILSON read a paper on Axial Rotation of Ovarian Cysts, causing Twisting of the Pedicle. Dr. BRIGGS read a paper on Nineteen Cases of Vaginal Hysterectomy for Uterine Cancer, and Dr. LEWERS also contributed Notes of Five Cases of Cancer of the Body of the Uterus in which Vaginal Hysterectomy was performed.

Epidemiology received an interesting addition to its literature in the shape of a paper on Bacterial Poisons from the pen of Dr. WILLIAM HUNTER. Dr. WASHBOURN and Dr. GOODALL communicated a paper on cases of Membranous Inflammation of the Throat during Scarlet Fever. Dr. JOHN MCVAIL delivered an address on the Aerial Convection of Small-pox from Hospitals, and Dr. ARMSTRONG opened a discussion on the Dissemination of Disease by Vagrants. A paper on Recent Developments in State Medicine by Mr. FLINN recorded the considerable improvements that have taken place in public health administration during the last few years. The question of Death Certification was discussed, with special reference to certain recommendations contained in the recent report of the Select Committee of the House of Commons. Dr. CAIGER read a paper on the Coexistence or Close Succession of Two or More Infectious Diseases in the Same Individual. A discussion on the tenure of medical officers of health was held at their society, and the question discussed from the legal point of view. Mr. JOSEPH WHITE read a paper on the Administration of Anæsthetics clinically considered, and recorded the results of his own extensive practice. Dr. SILK and others also read papers on this subject. In his inaugural address at the Manchester Medical Society Professor MANN dealt in an instructive manner with Synthetical Remedies, Extracts from Animal Tissues, and Germicides internally administered. A paper from Mr. PRIESTLEY SMITH emphasised the importance of periodically testing the Eyesight in Schools. The subject of the Administration of Hospital Relief was discussed in a paper by Dr. H. C. TWEEDY. Dr. HALLIDAY CROOM introduced a discussion on massage by a paper on Massage as an Adjuvant to Medical, Surgical, and Gynæcological Practice. Dr. ARGYLL ROBERTSON contributed a full account of a case of Filaria Loa. A case of Poisoning by one ounce of Hydrate of Chloral, followed by recovery, was related by Dr. R. J. COLENSO. Mr. MAKEIG JONES discussed the subject of Hospitals and the Profession.

The record of the Medical Societies for the year is encouraging, and the advance in all directions is great. Surgery has been especially active, and many brilliant successes have been achieved in operations upon cases of abdominal disease. Considerable attention has been paid, especially in the closing weeks of the year, to the anti-toxin treatment of diphtheria. We cannot but hope that further investigations and prolonged experience will bear out its early promise, and, if this should happily prove to be the case, that the workers in this field of research will soon be able to discover new paths of treatment for other diseases.

Special Sanitary and Analytical Commissions.

At the commencement of the year we published a full report of THE LANCET Special Sanitary Commission on Public Health Measures at Southampton. The fact that Southampton had been selected as the English port for the American line of steamers running backwards and forwards to New York had brought to that town a sudden increase of traffic and of population. But only half the town is satisfactorily drained; there are still some unhealthy slums, and the condition of the slaughter-houses is very bad. Fortunately, Southampton possesses a very energetic medical officer of health in the person of Mr. A. W. HARRIS, and we were able to describe the exceptional stringency with which he availed himself of every possible point in the law to secure the complete isolation of cases of small-pox and other infectious diseases. Mr. A. W. HARRIS did not follow the usual course of applying for a magistrate's order. It would have been necessary to prove that the patient could not isolate himself. At least two or three days might be lost and time given for the disease to spread. Mr. HARRIS carefully explained to the persons concerned that two sanitary inspectors in uniform would be placed at the door of the house to keep watch both day and night. If anyone entered or went out of the house action would be taken against such persons "for exposing an infected article"—namely, their clothes or persons which had been in contact with the patient. Another remarkable feature of the sanitary administration of Southampton is the excellent use made of the heat generated at the destructor where the town rubbish is burnt. This suffices to supply all the steam-power required for the raising of the sewage and the sludge from the low-lying districts, while the clinkers extracted from the furnace are ground up and mixed with cement. They make excellent artificial stone flags to pave the streets, &c. Unfortunately only half the town is satisfactorily drained, and we are not aware that the scheme, generally approved, for draining the remaining part of the town on similar principles has yet been carried out. With respect to principles of drainage, we were able to give a full and special account of the debates in the French Chamber of Deputies, which resulted in the sanctioning of a loan of 117,000,000 francs. This sum will defray the cost of increasing the Paris supply of potable spring water, which now amounts to 240 litres per day per inhabitant, so that it will no longer be necessary, in the dry season, to supply water from the River Seine for drinking purposes. This used to be a very dangerous practice; for, as a rule, typhoid fever broke out within a fortnight of the admission of Seine water into the mains. At present two-thirds of the sewage of Paris is allowed to flow in a raw condition into the Seine. The loan sanctioned will further cover the cost of disposing of the whole, instead of only one-third, of the Paris sewage on land, where it will be utilised for the cultivation of vegetables &c. It is in this manner that the authorities of Berlin have dealt—and for some time past—with their sewage. After assisting at the debate on this subject in the French Chambers our special correspondent went to Berlin, and there visited the sewage farms, the pumping stations, &c., and was able to give a full account of the realisation at Berlin of the principles of drainage now definitely adopted at Paris. On the same occasion he investigated the extensive municipal slaughter-houses of Berlin and the new and very effective method of destroying the carcases of diseased animals at Hamburg. The necessity of creating one or more public slaughter-houses for London is so generally admitted that any evidence as to the working of such institutions in other towns and countries is of practical utility in helping to solve our home problems. Among various other home subjects, we have on several occasions during the course of the year been able to insist on the necessity of extending the provisions of the Factory Act to laundries, where the work-people suffer from unsanitary conditions and overwork, while there is considerable risk of infecting the linen, which is hung out to dry in proximity of cases, generally concealed, of infectious disease. In respect to public hygiene in all its applications, we have always given great prominence to the gatherings of the international congresses of hygiene; indeed, we were first among English journals to make these congresses and their useful work known and appreciated in this country. Unfortunately, as the congresses have grown in size and importance they have lost in order and method. Early in the year we published severe criticism on the method, or rather the lack of method, in the organisation of the eighth International Congress of Hygiene, which was to meet at Budapest in September. Our advice, based on personal experience of all the Congresses held since 1878, was not followed, and consequently it is difficult to say what has been the upshot of the great gathering at Budapest. From our special correspondents, who were early on the field, we obtained multifarious details of debates scattered over an endless variety of subjects. There were some 800 papers announced to be read in twenty-six different sections, and more than 2500 persons had gathered together. Yet all this energy and all this learning was, to a great extent, frittered away. There was no attempt made to concentrate, on a few ripe, practical subjects, the attention and the work of this great Congress. Thus individual members felt themselves lost in the crowd. Many abandoned the work of their sections, wandered listlessly about, or overcrowded the bacteriological section, instead of attending to their own subjects. Thus in the sections papers were read before empty benches, and not a few speakers failed to put in an appearance when their turn had arrived. We have always held that, while Sections should be free to meet in the morning, to discuss any number of subjects and give the freest scope to individuals anxious to bring forward questions they themselves have selected, the real work of the Congress should consist of the discussion of a few carefully selected ripe and practical topics, submitted

to plenary assemblies held in the afternoon. The need of such concentration was proved by what actually happened at Budapest. The interest excited by the new facts submitted concerning the treatment of diphtheria by antitoxic serum and other questions debated by the bacteriologists drew the Congress together in spite of itself; and, while much important work was neglected and many Sections were so denuded that they had to close their doors, the Bacteriological Section was crowded to overflowing. At Geneva, in 1882, M. PASTEUR'S discoveries with respect to the attenuation of the virus of rabies and the preventive treatment of hydrophobia were reserved for the plenary afternoon sittings. Thus the whole Congress, without neglecting the work of the Sections, which met only in the morning, enjoyed the advantage in the afternoon of hearing M. PASTEUR and also Professor KOCH, who was likewise present. While regretting that the Budapest Congress was not organised like all the previous congresses, excepting albeit the Congress held in London in 1891, we were pleased to record some of the work done, the lavish hospitality shown, and the great interest displayed in the capital of Hungary with regard to all that related to the preservation of public health. From the Congress numerous excursions were organised, the most notable being that to Belgrade and Constantinople. This latter excursion we have fully described, including the day spent in quarantine at Tchataldja by the excursionists. At Belgrade one of the best receptions ever given to members of a congress had been organised, and our special correspondent subsequently returned to the capital of Servia so as to study more fully the sanitary conditions of that rising new European capital. His accounts of the endeavours which have been made by the Servians since they gained their national independence to place themselves in the first rank among civilised nations in respect to public works and sanitation will have been read with interest.

The vigour of the Analytical Department, in which work is carried out involving independent scientific inquiry in our Laboratory, has been steadily maintained. The most important investigation during the year, as it was also the biggest in scope, was undoubtedly that which dealt with the Hermite process of sewage treatment by electricity, as illustrated in the recent experiments at Worthing. This inquiry was begun early in the spring and the results were published in THE LANCET of May 26th. Our special commissioners paid several visits to Worthing, where both bacteriological and chemical experiments were conducted as far as was possible on the spot. The report subsequently issued contained an exhaustive account of the electrolysed sea water from a chemical point of view and of its bactericidal efficiency. Under the chemical section ten tables of analyses were given, including one which occupied an entire page of THE LANCET, while no less than nineteen tables recording bacteriological experiments occurred in the biological section of the report. We have reason to believe that this report was very highly valued by medical officers of health, sanitary authorities, and others throughout the country, who had been kept some time in suspense for a reliable pronouncement on a process which had attracted a more than ordinary share of public interest. The thanks of the Worthing town council were unanimously accorded to us at a meeting at which this vote was passed before the discussion of the ordinary proceedings was commenced. For the convenience of those specially interested in the question the report was reprinted in a pamphlet of sixteen pages. The next commission of inquiry related to a question of food adulteration—the use of alum in baking powders. In a case tried in the High Courts baking powder was ruled as being not an article of food within the meaning of the statute, and the employment, therefore, of objectionable ingredients such as alum, in accordance with this decision, does not constitute a legal offence. This ruling was given in spite of the court's admission that alum was probably injurious. Anything more absurd than the existence of an Act which forbids the addition of alum to flour or bread and permits at the same time its use in baking powder, which is used solely for bread and pastry making, is difficult to imagine. We trust this anomaly will be removed by the Select Committee on Food Products Adulteration, which commenced its labours in August and which is to be reappointed on the reassembling of Parliament. Makers of alum-free powders were invited to send specimens of their commodities to THE LANCET Laboratory for examination, and duplicates were obtained independently by our commissioners, and the results were published in THE LANCET of March 3rd. This was done in view of the above decision, and to enlighten the public as to which baking powders could be relied upon as being free from this objectionable ingredient. Of the powders purchased 10 per cent. were found to contain alum; in the rest either tartaric acid or cream of tartar was employed to expel the CO_2 gas from the bicarbonate of soda. On July 4th we published the results of a commission of inquiry on the composition and value of coffee extracts. This inquiry had its origin in the letter of a correspondent who had been led to use, and subsequently to recommend, the administration of coffee extract in opiate poisoning. A letter followed the publication of the foregoing note, in which the writer expressed doubt as to the wisdom of this suggestion, since there was no reason to believe, he wrote, that any of the so-called essences or extracts have any of the anti-narcotic properties of the genuine article, and further quoted the words of a New York firm to the effect that "what is generally known as essence of coffee in common parlance is a coffee-colouring substance made from burnt sugar or molasses; and the name essence of coffee is a misnomer." We did not consider it fair to the makers of coffee extracts in this country to publish this letter without expressing a promise to make an inquiry into the subject. The results eventually gained were, on the whole, opposed to the foregoing statements. In no case was an essence (and there were fifteen specimens examined) found to be destitute of the valued stimulant caffeine, although there were wide variations in its amount. Some 120 analytical determinations were made upon which this conclusion was based. Of other special work calling for operations in the Laboratory may be mentioned the interesting invention of Mr. VAN DER WEYDE—cube ice (THE LANCET, Feb. 10th)—and the barium waters of Llangammarch, which were only recently inspected and samples of which were submitted to examination (THE LANCET, Nov. 24th). Finally, the results of the analysis of ninety-four samples of foods, new drugs, &c. have been published in our

"Analytical Records" column, involving 230 analytical valuations, which, with 301 connected with special work alluded to, gives a total of 531 analytical determinations made in THE LANCET Laboratory during the past year. As regards our "Analytical Records," it should be added that nothing is reported in THE LANCET that is not examined and submitted to independent analysis in the Laboratory, which has been specially equipped for the express purpose Although the labour thus involved is by no means light, and may even give rise to delay, especially in the publication of important innovations, yet we feel it is the only course which justifies us in expressing any opinion at all on the various appliances, sanitary systems, new drugs, &c. which it is desirable to bring before the notice of the profession through the agency of our columns.

The Benevolent Agencies of the Profession.

It might be thought that in a profession like ours the need for benevolent help would be very small; but a little reflection, to say nothing of experience, will soon correct that view. Theoretically, perhaps, the healing profession should keep its members in health to a ripe old age like that of some of those whose work we have recorded in our Obituary; but the strain of education and of ever-multiplying examinations, the anxiety of early days waiting for practice, the increasing cost of living, the constant exposure to the causes of disease, and the ever-growing competition make the lives of medical men precarious and tend to shorten their days. Hence the pitiful demands on the resources of our benevolent agencies—the Society for the Relief of Widows and Orphans, the British Medical Benevolent Fund, the Royal Medical Benevolent College; and our own Relief Fund, and the constant appeals in our columns on behalf of individual cases of medical men or those whom they have left behind them more or less unprovided for. We hope to publish next week the annual report of THE LANCET Relief Fund, which was established to assist cases of temporary embarrassment. It cannot too often be insisted that the claim is strong on all medical men to provide, by economy and forethought and some form of life insurance, as far as possible, for "those of their own household," and, where Providence is kind, to support the Funds which minister so beneficently to the less fortunate members of their profession and to the widows and orphans of their brothers who fall by the way.

Honours to Medical Men.

In the medical profession the only recipient of a New Year honour was Surgeon-Major ERNEST HARROLD FENN, of the Coldstream Guards, who was appointed a Companion of the Order of the Indian Empire. Surgeon-Major FENN has filled the responsible post of surgeon to the Viceroy of India. The seventy-fifth anniversary of HER MAJESTY'S birthday was signalised by the addition of five names to the list of medical knights, and of these Sir F. SEYMOUR HADEN, F.R.C.S., is equally well known as an eminent surgeon and as the President of the Royal Society of Painter-etchers. The name of Sir JOHN BUCKNILL, M.D., F.R.C.P.Lond., F.R.S., is well known in the department of pyschological medicine, and he will be remembered as one of the original founders of the Volunteer movement; Sir THOMAS GRAINGER STEWART, M.D., F R C.P Edin., has done some excellent medical work; Sir JAMES A. RUSSELL, M.B., J.P., F.R.C.P. Edin., is Inspector of Anatomy for Scotland; and Sir ARTHUR RENWICK, M.D., has rendered good services to the State as a member of the Legislative Council of New South Wales and also as Minister of Public Instruction in the same colony. Surgeon-General Sir JAMES MOUAT, V.C., C.B., late Army Medical Department, was made a Knight Commander of the Bath; and Deputy Surgeon-General and Honorary Surgeon-General W. GEORGE NICHOLAS MANLEY, V.C., late Army Medical Department, and Fleet-Surgeon W. ROGERSON WHITE received Companionships of the same Order. Dr. ROBERT GRIEVE, Surgeon-General of the colony of British Guiana, received the Companionship of St. Michael and St. George, and Surgeon WALTER BOWDEN, R.N., received the Distinguished Service Order. The honour bestowed on Sir JOHN WILLIAMS, M.D., who received a Baronetcy in recognition of his attendance upon the Duchess of YORK on the occasion of the birth of Prince EDWARD of YORK and his services to HER MAJESTY'S family generally, was eminently well deserved; and the Companionship of the Bath conferred upon Dr. LEANDER STARR JAMESON was a recognition of the work which a member of our profession has done for England in Mashonaland and Matabeleland.

The Metropolitan Hospital Sunday Fund.

The annual report presented to the constituents of the Metropolitan Hospital Sunday Fund on Dec. 17th was certainly a more satisfactory document than that which was presented at the annual meeting in 1893, but the total receipts show a considerable falling off as compared with the year 1891, when they amounted to £45,330. In 1892 the amount fell to £41,512, in 1893 to £39,290, and during the present year it rose again to £43,679. This sum, after allowing for expenses, left a total amount available for distribution of £41 800, which was distributed amongst 127 hospitals and 55 dispensaries, as well as in the purchase of surgical appliances. Sir SAVILE CROSSLEY repeated his donation of £1000, and the list of contributions was headed by the Rev. Canon FLEMING, Vicar of St. Michael's, Chester-square, who sent in a donation of £1202 15*s.*; the Rev. C. J. RIDGEWAY, Vicar of Christ Church, Lancaster-gate, followed with a contribution of £1059 12*s.* 8*d.*; and the Rev. Prebendary E. EARDLEY-WILMOT, Vicar of St. Jude's, South Kensington, collected £770 10*s.* 9*d.* The number of contributing congregations was 1799.

Obituary.

It is, we trust, a wholesome feeling that leads us at the end of our summary to make allusion to our losses as a profession. The subject is always a painful one; but there is a sense in which it is more pleasant than painful. No better occupation of a few hours of the last days of a year can be devised than to study the lives of men such as those whose work is recorded in our obituary notices. They are wonderfully satisfactory lives in the sense of the service they imply to the locality in which they were spent and the character which underlies such service, and they are interesting to us by reason of the obvious importance of the factor of medical education in the formation of such lives. A few names need only to be culled from the lists of our Obituary to suggest histories of which any profession might be proud. We forget the accident of

their death in the greater thought of the permanence of their work. A few names belong to no locality—THEODOR BILLROTH, HERMANN LUDWIG HELMHOLTZ, CHARLES EDWARD BROWN-SÉQUARD, and OLIVER WENDELL HOLMES, by way of example. ROBERT BENTLEY had a reputation outside his profession, but we claim him as a member of it. But, short of such fame as theirs, we contemplate with pride the reputation of men in the ranks of medical practice, whose history week by week has taken up more or less of our space. The obituary list of 1894 contains among others the names of J. VALENTINE, M.B. Edin.; Surgeon-General R. LAWSON; ERNEST H. JACOB, M.D. Oxon.; Professor WILLIAM LEISHMAN, M.D. Glasg.; BARNARD W. HOLT, F.R.C.S.; ROBERT MACPHERSON, M.D. Aberd.; HENRY SMITH, F.R.C.S.; JOHN DICKINSON WEBSTER CROMPTON, F.R.C.S. (aged eighty-nine); ARTHUR HILL HASSALL, M.D. Lond.; THOMAS PATTERSON, B.A., M.D.R.U.I.; JOHN CLAY, M.R.C.S., L.S.A. (Birmingham); CHARLES GIBSON, M.D. St. And.; FREDERICK CHARLES ROBERTS, M.B., C.M. Edin. (Tientsin); WILLIAM JOHN LITTLE, M.D. Berol.; Professor GEORGE EDGEWORTH FENWICK, M.D. (Montreal); HERBERT GOUDE, M.D.; HENRY WEEKES, M.R.C.S.; A. E. TURNOUR, M.D. Edin. (Denb'gh); HENRY MADGE MADGE, M.D. St. And.; FRANK VIGERS BUNCH, F.R.C.S.; WILLIAM ALEXANDER GREENHILL, M.D. Oxon.; WILLIAM FREDERICK DEWSNAP, L.R.C.P. Lond.; OCTAVIUS STURGES, M.D. Cantab.; THOMAS STILES, M.R.C.S. (aged ninety-six, pupil of CLINE and Sir ASTLEY COOPER); CHRISTOPHER JOHNSON, F.R.C.S. Eng., Staff Surgeon WALTER DICKSON, M.D. Edin. (R.N., Medical Inspector to the Board of Customs); ALBERT NAPPER, M.R.C.S.; Deputy-Surgeon-General E. H. ROBERTS; WILLIAM BELL HUNTER, M.D., C.M. Glasg.; WM. WITHERS MOORE, M.D. Edin., F.R.C.P.; FRANCIS BISSETT HAWKINS, M.D. Oxon., F.R.S. (aged ninety-eight, and at his death the senior graduate of Oxford University, the senior Fellow of the Royal Society and of the Royal College of Physicians of London); WM. WALKER, M.D. Durham (Redcar); FRANCIS BUCHANAN WHITE, M.D. Edin. (Perth). It is not necessary now to recall the stories of the lives represented by these names and others. Some were very ripe, it will be seen, for rest; others were just entering with the brightest promise on their professional career. Some were scholars of a high order; others had seen service in every climate, in the Crimea or the Mutiny in India. The majority served at home and in the "daily round" and "common task" of the profession displayed those virtues which inspired the respect of many beyond their own immediate patients and friends. It is unnecessary as a rule to single out the loss of any life for special lamentation in a list so suggestive of regrets as an obituary; but the case of FRANK VIGERS BUNCH, the surgical registrar of University College Hospital, is to some extent exceptional. After taking nearly all the prizes within his reach, and passing for the Fellowship of the College before he was old enough legally to receive it, he contracted diphtheria from a dying child and became himself a victim to the disease. Such risks are in the nature of our profession, and the young medical man who succumbs to them dies at his post as bravely and as nobly as the young soldier who loses his life in his first engagement with the enemy.

Annotations.

"Ne quid nimis."

THE SERUM TREATMENT OF DIPHTHERIA.

THE adjourned debate at the Clinical Society upon the treatment of diphtheria by antitoxin serum afforded several observers an opportunity to relate their experiences upon it, and although the total amount of cases treated may appear small, yet in the opinion of all the efficacy of the remedy seemed to be assured. The question of efficacy was shown to be linked with that of the period of the disease at which the treatment is commenced, and in his brief but highly instructive remarks Dr. Sims Woodhead offered a scientific explanation of this apparent fact. Dr. MacCombie said that if the treatment were commenced on the second or third day it would mostly prevent the spread of membrane, and he had even withheld it in cases admitted after four days of illness. Dr. Thomas Eastes had come to the conclusion that every case would recover if treated within two days of onset and having no laryngeal symptoms. Then, too, Dr. Goodall, in his reply, said that of 32 cases treated within three days of onset only 2 died; whilst in 29, admitted between the fourth and fourteenth day, 11 died. This is, after all, the real test of the efficacy of the treatment, since it is in accordance with the known nature of diphtheria and its toxines. For our own part, we very much doubt whether, on the lines of treatment, local and general, hitherto adopted in diphtheria, there can be found any very marked difference in result between cases treated from the onset and those in which there has been delay in commencing treatment—indeed, it may be remarked that in many of the cases which have received the serum injections there was no suspension of local treatment. There are several other suggestive points in this interesting discussion. One is the possibility of separating the "antitoxin" from the serum and administering it apart from this fluid, as hinted by Dr. Newman; but Dr. Woodhead doubted whether a substance of the unstable constitution which "antitoxin" must necessarily have could be thus separated without suffering change in the process. It may be noted, too, that the "antitoxin" used by the different speakers was derived from at least four different sources, one of which was characterised by one speaker as a "secret remedy." Dr. Goodall sufficiently confuted the argument that the use of the serum might cause suppression of urine by his statement that all who have had experience of diphtheria had seen such cases, it being an effect produced by the disease itself. It is not, of course, possible to compare the results obtained from these different sources, but it must strike everyone that, even allowing full force to the figures adduced by Dr. MacCombie as to the fluctuating fatality of diphtheria in time-periods, the general outcome is distinctly in favour of a thorough trial of the method. It is, therefore, with satisfaction that the profession will learn the decision of the council of the society to refer the question to a committee for investigation and report. During its career the Clinical Society has undertaken many inquiries which have materially advanced medical science, but it may be affirmed that it has never yet embarked upon one of more vital importance or one which needs more care and deliberation in arriving at a conclusion than this.

THE ENVIRONMENT OF OUR PUBLIC SCHOOLS.

AT the Fine Art Society's rooms in Bond-street, always distinguished for the absence of sensationalism often associated with Bond-street art exhibitions, there is now on

view a collection of water-colour drawings representing the familiar haunts round six of the public schools, by Mr. Henry B. Wimbush. The style of these pictures is just a trifle *demodé*, but is perhaps appropriate to some of the delightfully picturesque scenes they so faithfully represent, and the educational principles inculcated in these places. In a country which can boast of a great tradition in landscape painting and a great past in water-colour drawing, the general public must be forgiven for expecting a fresher note than Mr. Wimbush is able to strike. He has perhaps, been overwhelmed by his subjects, and in his conscientious and overscrupulous care to represent Eton, Winchester, and the rest as they appear through the camera and to the eyes of the American father in search of a school, he would seem to have sacrificed some of his artistic convictions. This is amply proved by the two very beautiful drawings of "The Kennet" near Marlborough and "Clewer, Millstream" near Eton, where he has been quite unhampered by the thought of some possible critic who will stumble over the actuality of his presentation or deplore the absence of some local feature to which the artist may have wisely shut his eyes as being unnecessary and cloying detail. These two pictures, however, would do credit to any great collection of old or modern masters. Mr. Wimbush shows himself not only a colourist and a draughtsman, but, what is more important, even in pictures, an artist. The other pictures, as faithful records of places, fields, and buildings, are eminently recognisable. Their author possesses the quality, rare in a landscape painter, of being able to draw and scale his architecture, an invaluable talent when the scenes are localised in the catalogue. This talent is, however, often emphasised at the expense of colour, which is too often merely startling without convincing the spectator of its truth or beauty, an error especially noticeable in "The New Speech Room at Harrow" and in "Rugby Chapel" (a curious but, of course, accidental reminiscence of Samuel Palmer); yet the "Byron's Tomb" is admirable in depth of perspective. The majority of visitors to this entertaining exhibition, though doing every justice to the skill of the artist, will probably enjoy his pictures as reminiscences of their early days and of places where their happiest or unhappiest times were spent. The painted picture is still able to rouse or create a sentiment that the photograph, with all its modern improvements, cannot give. Those who have been educated at public schools are generously disposed to forget the circumstances under which they learnt so little and to remember only the pleasurable incidents of a past career, which Mr. Wimbush's drawings will enable them to recall in so pleasing a fashion.

LORD RANDOLPH CHURCHILL.

IT is, we believe, some two years since symptoms of nervous exhaustion began to show themselves in the popular and prominent statesman whose sad condition is now rousing the sympathy of all classes, creeds, and opinions. The symptoms were such as to make it evident to his medical advisers that he stood in urgent need of a complete rest from long-continued political labours, which may well be conceived to have been of an extremely arduous character when we remember how early in his career his official responsibilities commenced and how rapidly he came to the front. A difficulty of articulation, which excited comment at the time in the public press, gave the first note of warning to skilled observers that Lord Randolph Churchill was threatened with the form of paralysis which has rapidly declared itself during the last few months. He has been for many years past a patient of Dr. Roose, and has also been seen from time to time during the last ten years in consultation by Dr. Buzzard, and it was considered by them advisable that he should be well away from any temptation to work. As he was himself also anxious to make a prolonged tour abroad, he sailed at the end of last June for the United States in company with Lady Randolph Churchill and under the care of Dr. G. E. Keith. About four months ago, whilst at Yokohama, he was seized with transient paralysis of the left arm. Loss of power in other situations succeeded, and he arrived in London on Monday last in a semi-comatose condition, which has since become more confirmed. By our last accounts Lord Randolph Churchill had somewhat rallied and was taking nourishment better.

ARGON.

WE learn that Lord Rayleigh and Professor Ramsay will read a paper at the meeting of the Royal Society on the 31st prox. on an element stated to exist in the atmosphere. As the element has actually received a name (argon), there seems no doubt that the new candidate is entitled to a seat among the earlier-known elements after all. We hope that these eminent investigators will be able to clear away all scepticism about their discovery, and to enable their fellow workers in the field of chemistry to begin the new year with a new element.

THE KING'S LYNN WATER-SUPPLY.

AFTER the severe and prolonged epidemic of enteric fever in 1882, and especially by reason of Dr. Bruce Low's unfavourable report upon the water, to which alone he attributed the epidemic in question, the Waterworks Committee have devoted earnest consideration to the question and have decided upon adopting a scheme proposed by the borough engineer, Mr. E. J. Silcock, at a cost of £30,000. The Mayor has cut the first sod of the two wells in the lower chalk on the site selected by Mr. W. Whitaker, F.R.S. The wells will be about 100 ft. deep, with galleries running north and south in the chalk. The work is under the supervision of the borough engineer. The supply is to be constant, at the rate of 1,000,000 gallons daily; the population is about 20,000. Adjacent villages are to be supplied. This much-needed work was brought about outside the council very largely by the action of the medical men, and we have nothing but praise for the public spirit of the little Norfolk town, upon whose sanitary shortcomings we have before now been compelled to animadvert.

MEMORIAL TO THE LATE DR. STURGES.

A NUMEROUSLY attended meeting was held on Wednesday, Dec. 19th, in the board room of Westminster Hospital, to raise some memorial to the late Dr. Octavius Sturges, the senior physician. In the absence of the Duke of Westminster, the President, who wrote to express his regret at not being able to attend in consequence of his absence from London, the chair was occupied by Mr. George Cowell, F.R.C.S. Eng., senior surgeon to the hospital. Among those present were Sir Rutherford Alcock, the Dean of Westminster, the Rev. Dr. Troutbeck, Mr. H. D. Erskine of Cardross, Dr. Donkin, Dr. J. B. Potter, Dr. de Havilland Hall, Mr. Walter G. Spencer, Dean of the Medical School, and a large number of past and present students of the hospital. Letters from Dr. W. B. Cheadle, Dr. Whipham, Sir Benjamin Ward Richardson, Dr. W. Howship Dickinson, Dr. Thorowgood, Dr. Sidney Coupland, Dr. F. S. Palmer, Mr. F. S. Lambert, and many others, expressing sympathy with the object of the meeting having been read the following resolution was proposed by Sir Rutherford Alcock, seconded by the Rev. Dr. Troutbeck, and carried unanimously—viz.: "That this meeting cordially approves of the proposal to establish a memorial to Dr. Sturges, and pledges those present to make every exertion to promote this object." The second resolution,

proposed by the Dean of Westminster, seconded by Dr. J. B. Potter, and supported by Mr. Walter G. Spencer, and carried unanimously, was as follows—viz.: "That the memorial be a prize, exhibition, or scholarship in connexion with the Westminster Hospital Medical School, with which Dr. Sturges was so long associated, a portion of the money raised being set aside for the purchase of four permanent photographic portraits of Dr. Sturges, and to cover the cost of a small photograph to be issued with the forthcoming volume of the hospital reports." On the motion of Dr. A. M. Gossage, seconded by Mr. Thomas Bond, a third resolution was then carried for the formation of a large and representative committee for the purpose of carrying out the former resolution.

A LINK WITH THE PAST.

IN William Hunter Baillie, the only son of one of the most prominent physicians and learned anatomists and pathologists of the end of the last century and the beginning of this, we have lost a genuine link with the past, particularly with the medical past. Matthew Baillie, the father, was, as is well known, a physician to George III. and one of the most extraordinarily successful practitioners that England has ever known. Not that he was not also a scientific and learned man—he was both—but it was as a consulting physician that he earned his greatest repute. Matthew Baillie was not of a robust constitution, and his health is said to have been ruined by a practice which overtaxed his energies; and we can well believe it, for he is understood to have seen patients during the latter years of his life for some sixteen hours a day. Although Matthew Baillie died of phthisis at the age of sixty-two years, his only son, William Hunter Baillie, whose death occurred on Dec. 23rd, had reached the extraordinary age of ninety-seven years, and this longevity was not peculiar to the family, for the father's two sisters, Agnes and Joanna Baillie (the dramatist and poet) reached respectively the ages of one hundred and one and eighty-eight years. William Hunter Baillie was closely connected with the medical profession of the past in more ways than one. Not only was he his father's son, but he was christened after his great-uncle, William Hunter, John Hunter's celebrated elder brother, while his mother was Sophia, the daughter of Dr. Denman, who was father also of the celebrated Lord Chief Justice. Mr. William Hunter Baillie was a barrister, and led a quiet and uneventful life, but he manifested his interest in the profession to which he was so closely attached by ties of relationship by acting for many years as chairman of the Middlesex Hospital.

THE BATTLE OF THE CLUBS AT CORK.

FURTHER information confirms the view that the medical clubs of Cork were grossly abused and that the profession is completely justified in the stand which it is making against the system. The action of the medical men began in 1892 in consequence of the increase in the number of clubs and their members, the latter including bank managers, brewery managers, builders and contractors, ship's captains, stockbrokers, ironfounders, plumbers with large businesses, vintners, landlords, and many other such well-to-do persons. That such persons should have medical attendance on themselves and their families—for we are informed that families are included—for from 2*d.* to 4*d.* a week is simply disgraceful. Clubs are a permissible institution for the humbler members of the working classes, but for such classes as the above they are an abuse, and a very mean one. The new rules, which have been adopted by the whole profession, will exclude all persons with incomes over £200. Those with incomes under £100 or whose house is valued under £7 10*s.* will pay 7*s.* 6*d.* a year; those under £200 or whose dwelling-house is valued under £15 per annum 15*s.* a year. For other classes than these medical attendance on club terms is unjust to the profession and demoralising to the patients. Eighteen out of thirty are opposing the reasonable demands of the medical profession. We cannot too highly praise the almost absolute unanimity of the profession. But there seems to be, sad to say, one exception which proves the rule. A stranger is alleged to have come in to take the clubs on even lower terms than before. If this be so such action cannot be too strongly condemned. This is no question of dealing harshly with the poor. They are provided for in every way. It is simply the rising of a great liberal and learned profession against a mean abuse of its generosity and sympathy by those who ought to reward and support it.

THE INDIAN MEDICAL CONGRESS.

THE first Indian Medical Congress, to whose sessions we wish every success both honourable and practical, was opened in Calcutta on Christmas Eve by the Viceroy of India in the presence of many European and native officials.

Surgeon-Colonel R. Harvey, M.D., F.R.C.P., D.S.O., delivered an opening address, in which he eloquently expatiated on the progress in medical and sanitary science made in India.

The following papers are announced to be read at the Congress which is now going on:—1. Carlsbad and its Thermal Waters for Anglo-Indians. (Sir Joseph Fayrer.) 2. Treatment of Tropical Diseases by Alkaline-saline Mineral Waters. (Surgeon-Major Tarleton Young.) 3 The Value of Quinine. (Sir William Moore.) 4. Treatment of Malarial Fevers by the Hypodermic Injection of Quinine. (Surgeon-Lieutenant-Colonel P. Benson.) 5. A New Classification of Indian Fevers. (Surgeon-Captain Ronald Ross.) 6. Prophylaxis of Malarial Fevers. (Surgeon-Major Andrew Duncan.) 7. Malarial Tissues: Specimens from Marchiafava's Laboratory. (Surgeon-Captain A. E. Roberts.) 8. Indian Fevers. (Katrak and Tavaria.) 9. Some Points on Indian Fevers. (P. Mookerjee.) 10. Fevers of India. (Banerji.) 11. Fevers of Lower Bengal. (N. C. Mitra.) 12, 13, 14, 15. Antipyretics in Indian Fevers. (A. C. Mitra, P. Mookerjee, Katrak, R. B. Banerji.) 16. Treatment of Pyrexia. (Surgeon-Lieutenant-Colonel A. Deane.) 17. The Growth, Manufacture, and Distribution by Government of Quinine. (Brigade Surgeon-Lieutenant-Colonel G. King, Superintendent of the Royal Botanical Gardens.) 18. Indian Fevers. (Surgeon-Captain C. E Sinclair.) 19. Changes produced in the Organs by Chronic Malarial Poisoning. (Childe.) 20. Malaria. (P. N. Mookerjee.) 21. Antipyretic Treatment of Fevers. (Surgeon-Captain G. S. Thompson.) 22. Spleen Diseases. (R. P. Banerji.) 23. What is Remittent Fever? (Katrak.) 24. Nasa Fever. (Mookerjee.) 25. (Fernandez.) 26. Moon Fever. (P. C. Sanyal.) 27. Typhus Fever at Hoti Mardan and in Beluchistan. (Surgeon-Captain L. J. Pisani.) 28. Typhus Fever in the Bolan Pass. (Surgeon-Captain Vost.) 29. Infectious Pneumonia. (Surgeon-Major A. Duncan.) 30. Treatment of Pneumonia by Digitalis. (Surgeon-Captain T. Grainger.) 31. Enteric Fever in India; its Diffusion and Prevention. (Surgeon-Major G. Ranking.) 32. Snake Poison. (Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham.) 33. Strychnia in Snake-bite. (Surgeon-Major J. J. Pratt.) 34. (Surgeon-Lieutenant-Colonel J. Duke.) 35. Permanganate of Potassium in the Bites of Rabid Animals. (Surgeon-Lieutenant-Colonel J. Duke.) 36. Treatment of the Bites of Rabid Animals. (Dr. D. Morrison.) 37. The Native Treatment of Snake-bite, with Special Reference to Croton Tigleum. (Dr. S. C. Sarkar.) 38 Anti-choleraic Inoculation. (M. Haffkine.) 39. Observations on Cholera. (Professor E. H. Hankin.) 40. Pilocarpine for the Suppression of Urine in Cholera. (Surgeon-Lieutenant-Colonel J. Duke.) 41. Treatment of Cholera. (A. Mitra.) 42. (B. C. Sen.) 43. Cholera. (Surgeon-Captain H. N. Thompson.) 44. Gleanings from the Records of the Bengal Medical Department. (Brigade-Surgeon-Lieutenant-Colonel Hendley.) 45. Indian Systems of Medicine. 46. Filarial Disease. (Surgeon-

Major J. Maitland.) 47. Prevalence of Ankylostomiasis in Madras. (Surgeon-Captain Williams.) 48. Ankylostomiasis. (H. Thornhill.) 49. (J. D. Macdonald.) 50. Elephantiasis. (G. Sinha.) 51. Leprosy around Simla. (Dr. Carleton.) 52. Leprosy. (Dr. A. Mitra.) 53. Parangi.[1] (Dr. Kynsey.) 54. (Allygalle.) 55. (Thomasz.) 56. Sunstroke. (C. D. Gupta.) 57. Treatment of Chronic Dysentery. (Dr. H. Galley.) 58. Hill Diarrhœa and its Treatment. (Dr. A. Adames.) 59. Hill Diarrhœa. (Dr. Weatherly.) 60. Prevalence of Ankylostomiasis. (Surgeon-Major E. Dobson.) 61. The Antiseptic Treatment of Diarrhœa. (Dr. Katrak.) 62. Framboesia (Yaws). (A. H. Nolari.) 63. (Wolfe.) 64. Typhoid Fever among Natives in India. (Assistant-Surgeon Ram Kishen.) 65. Immunity. (Dr. A. D. Cooper.) 66. Treatment of Chronic Heart Disease by the Schott System. (Surgeon-Lieutenant-Colonel Nicholson.) 67. Clinical Features of Beri-beri. (Surgeon-Major D. Basu.) 68. Hiccough: a Clinical and Physiological Sketch. 69. On the Work of the Dufferin Fund in India. (Brigade-Surgeon-Lieutenant-Colonel B. Franklin.) 70. Hypnotism in Medical Practice. (Dr. R. Tata.) 71. Causation of Disease in Gaols. (Assistant Surgeon C. Shah.) 72. Contagious Pemphigus. (Assistant Surgeon S. N. Singh.) 73. Oxaluria in the Manipuri. 74. The Tongue and its Clinical Importance. (Dr. S. Aiyer.) 75. Electro-Therapeutics. (N. L. Ghose.) 76. On the Coagulability of the Blood. (Surgeon-Lieutenant Rogers.) 77. Hyperpyrexia in Enteric Fever. (Dr. J. F. Tushy.) 78. Hodgkin's Disease. (Surgeon-Captain Chaytor White.) 79. The Microbes of Indian Rivers. (E. H. Hankin.) 80. The Disinfection of Wells. (E. H. Hankin.) 81. On the Connexion between Cholera, Rainfall, and the Subsoil Water-level in the Madras Presidency. (Surgeon-Lieutenant-Colonel W. G. King, Sanitary Commissioner for Madras.) 82. Meteorology of Cholera in India. (Surgeon-Captain H. Herbert.) 83. Influence of Railways in the Spread of Cholera. (Surgeon-Major J. Lewtes.) 84. Vaccination in Bengal. (Surgeon-Lieutenant-Colonel Gregg.) 85. Free Vaccination in Puri District. (Dr. Banks.) 86. Vaccination System of India. (Dr. S. O. Kantak.) 87. Humanised Buffalo Vaccination. (Assistant-Surgeon B. L. Ghose.) 88. The Possibility of a Special Sanitary Service for the Mufasal. (Surgeon-Captain A. Nott.) 89. Sanitary Organisation for Bengal. (A. F. Hughes, C.I.E.) 90. The Need of a Sanitary Service for India. (Dr. W. J. Simpson.) 91. Sanitary Defects. (Surgeon-Lieutenant-Colonel A. F. Dobson.) 92. Sanitary Arrangements at Kumbh Fairs. (Brigade-Surgeon-Lieutenant-Colonel G. Hutchinson, Sanitary Commissioner, N.W.P.) 93. Sanitary Progress in Puri. (Dr. Banks.) 94. Unhealthy Tracts in Bengal. (Surgeon-Lieutenant-Colonel Gregg, Sanitary Commissioner, Lower Bengal.) 95. Waterlogging of the Area of the Western Jumna Canal. (Surgeon-Captain F. J. Dyson, Department Sanitary Commissioner, Punjab.) 96. Cremation and Burial. (Dr. Hay Jaganadhan.) 97. Sewage Farming. (Dr. J. N. Cook.) 98. Sewage Farming in Bengal. (Dr. Gregg.) 99. House Connexions of Sewers in Bombay. (Dr. Katrak.) 100. Itinerant Medical Relief. (Assistant-Surgeon S. Aiyer.) 101. Puri Pilgrim Traffic. (Surgeon-Captain O'Gorman.) 102. Quarantine and Cholera. (Surgeon-Captain O'Gorman.) 103. The Famine Foods of India. (Dr. A. Ghose.) 104. Climatic and Hygienic Condition of Kalat. (Surgeon-Lieutenant Barnett.) 105. Mussoorie as a Health Resort. (Dr. Morton.) 106. The Value of the Chemical and Bacteriological Examination of Water. (Surgeon-Major A. M. Davie.) 107. Unhealthiness of the Presidency Division. (K. Bose.) 108. Use and Abuse of Hemp Drugs. (Surgeon-Lieutenant-Colonel C. J. H. Warden.) 109. Certain Aspects of Arsenical Poisoning. (Surgeon-Colonel R. Harvey.) 110. Food Adulteration. (J. N. Dutt.) 111. The Necessity of an Act Restricting the Free Sale of Poisons in Bengal. (Dr. C. L. Bose.) 112. Fabricated Wounds. (Assistant-Surgeon Akbar Khan.) 113. Hemp Drugs and Insanity. (Assistant-Surgeon B. Das.) 114. Paranoia. (H. Jaganadhan.) 115. Poisoning by Scopolia lurida. (Macnab.) 116. Indigenous Drugs of India. (R. P. Banerji.) 117. Indian Pharmacology: a Review. (Kanai Lal Dey, Rai Bahadur.) 118. Indigenous Drugs of Bombay. (R. N. Khory.) 119. Indigenous Drugs. (G. C. Bagchee.) 120. Treatment of Opium Poisoning by Indigenous Drugs. (A. C. Champati.) 121. Therapeutic Value of Vapor Opii. (Dr. Cama.) 122. Therapeutics of Mádar (Calotropis giganten). (Dr. J. Morton.) 123. Tinospora Cordifolia, or Gulancha. (G. Sinha.) 124. Hindu Poison Lore. (S. Aiyer.) 125. Seeds of Shimul in Small-pox. (A. C. Sarkar.) 126. Ozzymum Sanctata. (A. C. Sarkar.) 127. Wounds by the Lee-Mitford Bullet. (Surgeon-Major A. Duncan.) 128. (Pilcher.) 129. (Swabey.) 130. Case of Gunshot Wound. (Surgeon-Major D. G. Crawford.) 131. Casualties in Modern Warfare from the Point of View of an Ambulance Surgeon. (Surgeon-Captain C. H. Melville.) 132. The Mobilisation of a Field Hospital. (Surgeon-Lieutenant H. G. Melville.) 133. The Field Organisation of Ambulance Establishment. (Surgeon-Captain Morris.) 134. The Indian Nursing Service in Station Hospitals and on Field Service. (Miss C. G. Loch.) 135. Medical History of the Abor Expedition. (Surgeon-Lieutenant G. T. Birdwood.) 136. Castration in Khelat. (Surgeon-Lieutenant Burnett.) 137. Treatment of Syphilis. (Surgeon-Captain Deeble.) 138. Differential Diagnosis of Primary Venereal Sores. (Surgeon-Major Battersby.) 139. Hypodermic Injection of Mercury in Syphilis. (Surgeon-Major Love.) 140. (Le Mottée.) 141. Teetotalism and Enteric Fever in the British Army. (Surgeon Captain J. Fayrer.) 142. Syphilis in India. (P. C. Sanjat.) 143. Frost-bite in Mountain Passes. (Leonard.) 144. Ligature of the Innominate Artery. (Surgeon-Major Lewtes.) 145. Abdominal Surgery in the Musfasal. (Surgeon-Major Peck.) 146. Treatment of Mycetoma without Amputation. (Surgeon-Captain Macnab.) 147. Mycetoma. (Assistant-Surgeon T. M. Shah.) 148. Suppurative Hydrocele. (Assistant-Surgeon Zahiruddin Ahmed.) 149. Rainoplasty. (Assistant-Surgeon T. M. Shah.) 150. Rhinoplasty. (Assistant-Surgeon R. C. Gupta.) 151. (V. N. Bhagvat.) 152. Surgical Treatment of Ectopia Vesicæ (Surgeon-Captain Drake-Brockman.) 153. The Abuse of Suprapubic Lithotomy. (Dr. A. Powell.) 154. Distribution of Vesical Calculus, with a Theory of its Causation. (Surgeon-Captain A. E. Roberts.) 155. Operative Treatment of Goitre. (Surgeon-Captain Harold Brown.) 156. Malignant Pustule. (Surgeon-Major Dodd.) 157. Rare Dislocation of Patella. (Surgeon-Major Dodd.) 158. Injury of Vision from Watching a Solar Eclipse. (Surgeon-Major Dodd.) 159. Ophthalmic Surgery (Surgeon Abdul Rahim Khan Bahadur.) 160. Artificial Production of Cataract. (Surgeon-Captain Maynard.) 161. Treatment of Impairment of Vision after Cataract Operations. (Surgeon-Captain Fink.) 162. Quinine Amaurosis. (Surgeon-Captain Roberts.) 163. Chloroform Administration. (Dr. A. Neve.) 164. Bone Disease. (Dr. A. Neve.) 165. Experiments on Tetanus. (Dr. Mitra.) 166. Cranial Surgery. (Surgeon-Lieutenant-Colonel R. D. Murray.) 167. Guinea Worm. (Surgeon-Lieutenant-Colonel Duke.) 168. A New Method of Amputating the Tongue. (Dr. A. Powell.) 169. Administration of Chloroform. (Dr. A. Powell.) 170. Surgical Statistics. (Surgeon-Captain Maynard.) 171. Hepatic Abscess. (Asdar Ali Khan.) 172. Conjunctivitis. (T. N. Mazumdar.) 173. The Bassini Method of the Radical Cure of Hernia. (Dr. H. Galley.) 174. Relationship of Crime to Insanity and Head Measurement, with special reference to Criminal Responsibility. (Surgeon-Captain J. R. Macnamara.) 175. Abnormalities in the Human Body. (B. K. Kaul.) 176. A Method of Dealing with very large Calculi in the Bladder. (Surgeon-Captain E. Jennings.) 177. Guinea Worm. (Surgeon-Lieutenant-Colonel J. Duke.) 178. Diabetes. (Dr. A. Mitra.) 179. Cases benefited or otherwise by a Hill Climate. (Dr. Weatherly.) 180. A Skin Disease peculiar to Kurseong. (Dr. Weatherly.) 181. Creolin Irrigation in Compound Fractures. (Dr. A. Mitra.) 182. Cancer of the Penis. (M. N. Ohdedar.) 183. Post-mortem Notes at the Lahore Medical College. (Surgeon-Captain Burton Brown.) 184. Mortality of Respiratory Affections in Northern India. (Surgeon Lieutenant-Colonel Hendley.) 185. Plague in Kumaon. (Brigadier-Surgeon-Lieutenant-Colonel Hutcheson. 186. Influence of Season on Goitre. (Brigadier-Surgeon-Lieutenant-Colonel Hutcheson.) 187. Symphysiotomy. (Surgeon-Major Dimmock.) 188. Puerperal Fever in India. (Surgeon-Major Dimmock.) 189. Puerperal Fever in Bombay. (Surgeon-Major T. B. Nariman.) 190. Ovariotomy in India. (Dr. E. P. Sarbadhikari.) 191. Influence of Malaria on Abortion. (Dr. Weatherly.) 192. Treatment of Abortion. (M. N. Ohdedar.) 193. Menstruation in Warm Climates. (B. C. Sen.) 194. Age of Cessation of Menstruation in Warm Climates. (Surgeon-Lieutenant-Colonel Joubert.) 195. Obstetric Operations. (De Stordl.) 196. Biliary Cirrhosis in Children. (N. L. Sirkar.) 197. (J. N. Ghose.) 198. (Mackenzie.) 199. Infantile Scurvy in Calcutta. (P. D. Ghose.) 200. Blindness in Behar. (K. P. Labiri.) 201. Intra-laryngeal Tumours. (Smyth.) 202. Radical Cure of Inguinal Hernia. (Gupta.) 203. The Prevalence of Diabetes in Lower Bengal. (K. C. Bose.)

[1] Parangi = Framboesia = Yaws.

THE JANUARY MEETING OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE agenda for the meeting of the Fellows of the Royal College of Surgeons of England, to be held on Thursday, Jan. 3rd, 1895, at 4 P.M., together with the minutes of the preceding half-yearly meeting on July 5th last, have been issued. The first business after the reading and confirmation of the minutes relates to a resolution adopted by the Fellows at the meeting in July in regard to the mode of election to the office of President. About a month before the last meeting of the Fellows of the College, the Central Executive Council of the Society of Fellows had issued a circular inviting the opinions of the members of the society upon various questions, including the mode of election of the President. On this latter subject the members of the society were asked to express their opinion in favour of one or other of three propositions—viz., (1) that the President shall be elected by the Fellows; (2) that the President shall be nominated by the Council and elected by the Fellows; (3) that the President shall be elected by the Council from amongst their number as at present. The result of this restricted poll was that about an equal number of the members of the society voted for election of the President by the Council as at present and for election by the Fellows. This indecisive issue of the limited canvass of the society induced the President of the Central Executive Council of the Society of Fellows, Mr. H. W. Page, to give notice of the following resolution: "That the Council be requested to take steps for obtaining the opinion of the Fellows on the mode of election to the office of President." At the meeting of the Fellows the resolution was seconded by Mr Joseph Griffiths and carried by 23 votes to 8. On July 30th, the resolution having been discussed by the Council, it was moved by Mr. Bryant and seconded by Mr. Spencer Wells: "That the Council are not prepared at the present time to consult the Fellows or solicit their opinion through other means than the meetings of Fellows that have been lately established." To this an amendment was moved by Mr. Rivington and seconded by Mr. Willett: "That in compliance with the request of the meeting of Fellows the Council take steps for obtaining the opinion of the Fellows on the mode of election to the office of President." This amendment having been lost, the original motion was passed, and the following addendum was moved and carried: "That the Council would, however, point out that, if any Fellow is anxious to test the opinion of the general body of Fellows as to whether or not it is desirable to make any change in the present mode of election to the office of President, it is open to him to do so by submitting a motion on the question to the meeting of Fellows in January or to some subsequent meeting." The resolution of the Council and the addendum incorporated with it will be reported to the meeting of Fellows on Jan. 3rd. Whether it will be discussed or not we do not know, but it is obviously open to criticism. That the Council should have declined to canvass the opinion of the Fellows in accordance with the wish of the Society of Fellows is not surprising, because, as a body, it is probably quite content with the present mode of election of President; and it might be thought, perhaps, by some that the mere fact of a canvass implied a bias on the part of the Council in favour of the election of the President by the Fellows. We do not share this view, because it would be quite easy for the Council to obviate any misconception on this score. It would, however, be placed in an uncongenial position if a large majority of the Fellows proved to be in favour of the Fellows electing the President. Hence we are not surprised at the determination of the Council. On the other hand, it will probably be found that the Council is the body best fitted for ascertaining what the opinions of the great bulk of the Fellows really are, and doubtless the amendment moved by Mr. Rivington and Mr. Willett was inspired by the desire to ascertain officially the views of the Fellows and set a *vexata quæstio* at rest. We must confess, however, to considerable surprise that the Council should have passed the addendum to their original resolution, as it appears to us to contain a very obvious fallacy. It asserts, in fact, that any Fellow can test the opinion of the general body of Fellows by submitting a motion to one of the half-yearly meetings of Fellows. Now, this is just what he cannot do. How many Fellows have attended or are likely to attend these meetings? At the last meeting there were altogether 71 Fellows present out of a total of more than 1100. If the whole of the 71 Fellows had voted in one way it would have been a presumption that their views would be endorsed by the general body, but a majority in such an assembly would not be a reliable indication of the opinion of the majority of the whole body of Fellows. What did the Council say in November, 1885, when it had been pressed by a general meeting of Fellows and Members not to make any alteration in the constitution or in the relations of the College or in any of its by-laws or ordinances without the consent of the Fellows and Members convened to discuss the same? After objecting to this course on the ground of its entailing delay, and because the Fellows and Members in general could not be such competent judges as the Council, the Council added: "Moreover it is certain that any general meeting convened for the purpose would consist only of a small fraction of the whole body of Fellows and Members, and neither by this nor by any other means which could be devised would the Council be able to obtain satisfactory information as to the opinion of the majority of the Fellows and Members." That which applies to the Fellows and Members in meeting assembled applies equally to the Fellows alone, and the earlier opinion of the Council appears to us to be much sounder than the opposite and later view.

The refusal of the Council to canvass the Fellows and the general expediency of coöperation on the part of the two organised bodies of Fellows (the Association of Fellows and the Society of Fellows) brought about a recent conference between subcommittees of their Executive Councils, with the result that the Society of Fellows undertook to reissue its questions to the whole body of Fellows, and the Association of Fellows undertook to urge upon its members that they should reply to the society's application. At the coming meeting Mr. Herbert Page, on behalf of the Society of Fellows, will communicate the result of the canvass made by the society of all Fellows resident in Great Britain upon the mode of election to the office of President. This result will be an excellent test of the ability or inability of an independent canvass to elicit the opinions of the Fellows, as it will take place under the most favourable auspices, both associations having acted more or less in concert with each other.

The remaining business of the meetings of Fellows in January will consist in the consideration of nearly identical resolutions of which notice has been given on behalf of the two societies. This is obviously a position in which there should be an amalgamation of action and an agreement before the meeting between the two bodies, the resolution being proposed by a member of one body and seconded by a member of the other. The movement in favour of a new Charter to embody the concessions made to the Fellows originated with the Association of Fellows, as did also the proposal for a conference between the two societies and the desire for joint action in the interests of the Fellows at large. The Association of Fellows, which has rendered great services to the Fellows, might have stood upon its record and acted independently, but it has wisely preferred to a conjoint action so far as conjoint action is possible, and has been ready even to yield the place of honour in this question of a new Charter to the younger society. It would be altogether out of keeping with the spirit of mutual concession and friendly coöperation if the Society of Fellows were to endeavour for a moment to monopolise the field. The association could well afford to stand on one side; but the society could not afford to be the cause of this result, and therefore, in the interests of harmony and good feeling, and in the interests of a reform movement which promises so fairly for the future of the College, we sincerely hope to see the two bodies of Fellows acting in concert at the half-yearly meeting of the Fellows on Jan. 3rd, 1895. This friendly agreement would be a happy augury for the course of College politics in the new year which is about to dawn upon us.

PRESENTATION.—Dr. Henry J. Neilson of Bulwell, Nottingham, has been presented with a silver-mounted umbrella by the members of the Radford, Basford, and Bulwell M. R. Ambulance Corps in recognition of his efficient lectures on first aid.

SANITATION AT BELGRADE.

(FROM A SPECIAL CORRESPONDENT.)

(*Concluded from p. 1509.*)

THERE is a difficulty in respect to the drainage of Belgrade which we do not encounter in England. I was taken to see the City Civil Hospital, and here I found that the urinals and sinks were not trapped. On my expostulating it was explained that there had been syphon traps, but these had all burst in the winter. Though it is very warm in summer the temperature in winter often descends to 20° C. below zero. This suggests the necessity for some sort of patent trap that will act efficiently even during a hard frost. Indeed, the whole question of drainage in very cold climates has still to be carefully studied. In any case this is no excuse for leaving pipes untrapped, for traps that screw on and off could be easily obtained, and these might be removed during an intense frost, particularly as at that time the danger from sewer air is not so great. But the condition of the hospital throughout was in absolute discord with the sanitary principles that should govern the building of such institutions. The plan of the hospital is more than thirty-six years old, and is like that of the Jews' hospital at Berlin. For instance, in the operating-room not only are there numerous angles and corners, but there are actually huge bare rafters across the ceiling. At the hospital there is a sewer, which was built some thirty years ago, by which the sewage is conveyed directly to the Danube; but there is no attempt made to prevent the sewer air entering the hospital. Thus, even in the hospital kitchen there is a large, open, untrapped drain. The free admission of sewer air into the hospital is all the more likely to be dangerous as the closet and urinals are in a filthy condition, and the flushing apparatus in several closets did not work when I tested them. In the garden of the hospital there are some huts that are in a far better sanitary condition; but these cannot be used in frosty weather, for even when the stoves are heated to their full capacity the temperature cannot be raised to more than 42° F. The worst part of the hospital is the portion allotted to prisoners. Here, presumably to avoid danger of escape, there are no windows. The outer rooms, which have windows, are occupied by the gendarmes, while the prisoners lie in the inner, dark, unventilated basement cells. One prisoner—a brigand who had killed a gendarme and was wounded in the struggle—had chains riveted to his ankles weighing twenty-five kilogrammes. What with the chains and the dark, noisome place in which these ruffians were imprisoned, the impression produced on my mind was very unpleasant. This is not the sort of hospital prison that I had expected to find in a civilised country. Dr. Soubotich and the other medical men whom I met at the hospital very readily recognised all these defects; but, as they pointed out to me, the hospital is really a palatial construction compared to the huts and cottages in which a great portion of the Servian people live. This essentially agricultural population have no experience whatsoever of sanitation, though they have the right to vote and sometimes elect simple agricultural peasants to be Members of Parliament. These deputies had often no other knowledge of drainage than that of a hole dug in the earth and a few planks put over it to constitute a closet. It is true that there was a compulsory Education Act adopted in 1873, but the war interfered with its application, and it cannot be said to have come into operation before 1882. Thus we must wait some years longer before its effect can be felt. In the meanwhile it is very difficult to obtain from representatives of rural districts votes in favour of expenditure for purposes of drainage, &c., as they have no experience whatsoever in such matters.

It was not necessary to go far to see how the poorer people live in Servia. Immediately opposite the hospital there is the poorest slum of Belgrade. Round an open space, of irregular shape and absolutely unpaved, there are a number of small cottages. Of these I selected the cottage for which the lowest rent is paid, and I was able to take a photograph of this dwelling. (Fig. 1.) The cottage consists of one single room, measuring ten feet by sixteen. It has a door and two windows. The room is absolutely devoid of any pretence of a floor. The earth is bare and uncovered. The woman sitting at the door and the man standing close by inhabit this cottage. They have no bed. In a corner of the one room there is a piece of straw matting, and they lie down on this to sleep. They are only separated from the bare earth by this very thin layer of matted straw, which is not a quarter of an inch thick. As there is no bedding they must of necessity sleep with their clothes on. The most important article of furniture in the place—in fact, the only object that had any sort of value—was a small iron stove, which serves for cooking purposes and to keep the place warm. The rent paid

FIG. 1.

Cottages in the poorest quarter of Belgrade.

for this cottage was seven dinars, or 5*s.* 7*d.*, per month. In contrast with the denuded condition of this very poor domicile I noted the cleanly and tidy appearance of both the man and the woman, and I found that they were cooking a fairly good dinner. There were three saucepans on the stove. One saucepan contained a large quantity of rice, which was being prepared with a skill and care that would rejoice lovers of good curries; another saucepan was full of haricot beans; and in the third there was a savoury mutton stew, which filled the little cottage with an appetising

FIG. 2.

View of the Town Hospital and of some Tramps.

odour. I could but express my surprise at the contrast presented by such a good dinner in such a poor place. It appears, however, that the Servian people are all hearty eaters; they live rough, hardy lives, can sleep in almost any corner, know little or nothing of the soft luxuries of Western civilisation; but, whatever happens, they will have a good solid meal. Thus I noticed on all sides a healthy vigour, even among the poorest people. The group in the photograph is a fair specimen of the poorest class. It will

be noted that they do not wear rags, but that their clothes are neat and clean. There are also a natural gracefulness and courtesy about these people that produce a very favourable impression. Thus it had no sooner been decided that one of the oldest women in the court should form part of the group than a chair was at once secured so that she should be spared the fatigue of standing. It will be seen also that one of these very poor cottages has a brave show of flowers at the window and white curtains, and when, by the side of these signs of refinement, we look at the beautiful embroidery work and the artistic hand loom weaving done in the poorest cottages of the peasantry, it will be admitted that the Servian people are well able to appreciate a high civilisation. My other photograph gives a view of the front of the hospital as seen from the poor court in question. (Fig 2.) I tried to persuade four tramps, who were passing by, to stand and form the foreground of the picture, but the woman was absolutely deaf, and could not be made to understand that she should not move. None of these tramps wore boots. They had skins fastened under their feet. One of the men had a magnificent brown sheepskin cap of great weight, and it was perhaps to counterbalance the excessive warmth of his headgear that he walked in his shirt sleeves. The ragged appearance of the tallest of these men may convey an idea of great poverty. Yet extreme poverty in Servia is rare, and this has an important bearing, not only on the health of the people, but also on the possibility of executing public works to improve the sanitation of the town. The law does not allow the seizure for debt of the peasant's land, cattle, forage, implements of labour, &c., unless he possesses more than is necessary for him to live in a fair degree of comfort. Then, whatever is taken from him, enough must be left for him to earn his living with ease. There are similar laws protecting small tradesmen, workmen, and others. Thus whatever debts may be incurred no one can be reduced to absolute penury, and this protective measure extends even to criminals and others, so that the imposition of fines by courts of justice shall not produce beggary. In this manner the hydra of pauperism has been almost excluded from the happy little kingdom of Servia. It is not necessary to expatiate on the far-reaching influence that this must have in the preservation of the health of the people. My object is rather to call attention to this legislation in its financial bearings upon the country. It means, I take it, that though there is no great wealth in Servia and no large fortunes, such taxes as are imposed can be paid. Therefore, a municipal or State guarantee for a loan to carry out sanitary works rests on a surer foundation than in countries where the great mass of the people are not so well able to meet the liabilities imposed by the State. Consequently there is good reason to hope that the town of Belgrade and the State of Servia generally will be able to obtain on satisfactory terms the financial assistance required to carry out those public works which are indispensable if Servia is really determined to take her stand among the most civilised nations of the world. In some respects Servia already holds this proud rank. For instance, I visited a magnificent primary school at Belgrade, which compares very favourably with the best Board schools of London. In the class-rooms there were no angles, the corners of the rooms being rounded off. Then perfect unilateral light is supplied. This is a subject which has been strangely neglected in England. At Belgrade there are windows only on one side of the class rooms; these are large and reach to the ceiling. Thus there are no conflicting rays of light to play havoc with the children's eyesight. Again, instead of warming where warmth is least required, which is the general practice the hot steam coils are placed under the window, just where the coldest surfaces exist. Ventilators admit the outer air upon these coils, so that it is partially warmed before it enters the room. In a word, the best methods of maintaining the healthiness of the class rooms are applied in the primary schools of Belgrade. There is no reason why the same scientific and progressive spirit should not be manifest in dealing with the water-supply and drainage of this town. Servia has but recently been emancipated from foreign oppression. Since then the nation has developed with remarkable energy. The country possesses many as yet uncultivated sources of wealth. It has coal, is rich in minerals, and nearly all the Servian women know how to weave in an artistic manner. Then there is a very high birth-rate, so that the population is increasing rapidly; and this increase would be still greater if sanitary works such as I have indicated were carried out, for such measures would, there can be but little doubt, reduce the death-rate by at least one-third. A brilliant future, therefore, seems near at hand to reward the efforts of this valiant people; and, if in their progress towards a healthier and happier condition the experience acquired in England can serve to light the way, then English sanitary reformers will have the pride and the gratification of having indirectly contributed to impart a stronger vitality and a higher civilisation to a people who are well worthy of our best sympathies.

THE CIVIL RIGHTS DEFENCE COMMITTEE.

THE CASE OF MR. R. B. ANDERSON, F.R.C.S.

WE have received from the executive of the Civil Rights Defence Committee an interim report dealing with the two separate matters which constitute Mr. Anderson's case. We are thoroughly in accord with the committee's proceedings, and, as we have before now expressed, hold most strongly that Mr. Anderson is a gravely wronged man. We therefore desire to recapitulate for our readers' benefit quite briefly the present position in which the case stands, feeling that the comprehension of the position will most surely lead them to appreciate the efforts that are being made on behalf of a fellow-citizen who is also a fellow-practitioner.

Mr. Anderson's case is as follows:—Certain suits *in formâ pauperis* were illegally permitted to be brought against him in Trinidad and Tobago, and illegal judgments were given and illegal orders were made by the Courts against him, ruining him in his practice as a medical man and in his estate, the Court attempting to crush his resistance by the exaction of excessive bail and by malicious false imprisonment. We do not intend to give detailed proof here of our accuracy in describing these actions and their results in such strenuous terms. The words of the Royal Commissioners appointed to inquire into the administration of justice in Trinidad and Tobago in themselves are sufficient justification for strong language. They speak of Mr. Anderson as having gone through "a judicial persecution," and hold that the action taken by the colonial courts in his affairs constitute "a public danger." The circular of the Civil Rights Defence Committee, which can be obtained from the Honorary Secretaries, Civil Rights Defence Committee, 5, Mitre-court, Temple, E.C., on application, sets out fully and clearly all that has happened, giving chapter, verse, and date for all the deductions. *These illegal judgments are still in force.* The immediate and urgent object of the committee is to raise funds to enable appeals to be taken to the Privy Council from these decisions of the courts of Trinidad and Tobago, which, being in force, prevent him from returning to Tobago to carry on his practice, collect his debts, dispose of his property, or in any way satisfactorily settle his affairs. There is no other course open to Mr. Anderson save to appeal to the Privy Council. The judgments have been upheld in an appeal court at Trinidad and leave to appeal thence to the Queen in Council has been refused. If this refusal cannot be rescinded this section of his case, the only section we are at present dealing with, will be at an end. To enable Mr. Anderson and his advisers to act with a free hand a sum of at least £1000 is required. Towards this sum we have had the pleasure of subscribing £10 and we shall be happy to acknowledge any contributions; and we urge upon our readers that, though times be hard, Mr. Anderson's case is still harder.

It will be remembered that an action was tried before the late Lord Chief Justice Coleridge and a Middlesex special jury in April last, brought by Mr. Anderson against the Trinidad judge for the above-mentioned illegal acts and orders. This action resulted, after a seven days' trial, in the following verdict for Mr. Anderson: "The jury find that the defendant Cook oppressively and with malice overstrained his judicial powers to the prejudice of the plaintiff and the wilful perversion of justice, and found a verdict for the plaintiff for £500." Notwithstanding this verdict, Lord Coleridge entered judgment for the defendant on the ground that even under the circumstances mentioned by the jury no action will lie against a judge. We mention this because Mr. Anderson's case is an intricate one, and we desire that our readers

should understand it exactly. Lord Coleridge's judgment in the action against Mr. Justice Cook has been confirmed by a Court of Appeal and the question may or may not be carried to the House of Lords. But whether it is or not this side of Mr. Anderson's case is only germane to our present appeal from a certain point of view. We are asking that the Civil Rights Defence Committee should be helped to find money to approach the Privy Council in the matter of setting aside certain illegal judgments. A jury has found, on a side issue, that these same judgments were oppressive and malicious, which strengthens the hands of the committee. If Lord Coleridge had been able to find in accordance with the verdict of the jury, the £500 damages would have gone far towards enabling Mr. Anderson to reach the Privy Council without appeal for further aid. But we desire that the two points should be kept separate in our readers' minds. We are appealing for £1000 for Mr. Anderson that he may have certain illegal judgments reversed; the broader question of judicial privilege is not before us.

CHRISTMAS BOOKS.

(Concluded from p. 1508.)

"SCENES FROM THE SHOW," by G. R. Sims. There are those who like Mr. Sims's work and those who do not—some find it strong, some mawkish, and some consider that it appeals too greatly to primitive emotions; but all must allow that he has the right spirit of story-telling. He does not sit down to write without knowing what he intends to write about; he believes that a story should have a proper beginning and a definite end, and he uses the clearest and, in his opinion, the most effective phraseology wherein to convey his meanings. "Scenes from the Show" (Chatto and Windus) is a series of short stories all of a sensational kind, all excellently readable, with many little touches showing the insight into character and powers of observing detail which "Dagonet" is known to possess.—"In Press-gang Days," by Edgar Pickering (Blackie and Sons), is a story founded on a theme which has stimulated many romance writers of the past, and which we have no doubt will be found popular for many years to come, although the basis on which such stories are founded has now long ceased to exist. Mr. Pickering's story is of naval adventure at the close of the last and opening of the present century. The hero being pressed into the naval service has the good fortune thereby to serve under Nelson, the ill-luck to see the inside of a French prison, and at last, after many hardships gallantly borne, reaches his native land in safety.—"To Punish the Tsar." (Cassell and Co.) This story, by Mr. Horace Hutchinson, also deals with gallantry in the service of the country. It records in vivid language the heroism of George Raeburn, who emerges from the Crimean War, after fighting like the Vikings of old, with the terrible affliction of complete blindness. The story is vivid and well told, and, in spite of the apparent sadness of the theme, by no means unsuited to this proverbially hilarious season, as we are led to hope that the blindness is only of a temporary character, proving a very good test of the faithfulness of the hero's sweetheart, but probably no permanent drawback to his future career.—The death of Robert Louis Stevenson, so circumstantially reported that we can hardly continue to doubt its verity, has occurred simultaneously with the reissue of the wonderful stories, "The Suicide Club" and "The Raja's Diamond" (Chatto and Windus), which first saw the light under the title of *The New Arabian Nights* in an obscure but brilliant little paper called *London*. They form the most typical example of one side, and the most distinctive side, of Stevenson's work. His exact place in literature may be difficult to determine, and it may be long before it is satisfactorily decided upon; but it is strongly our opinion that his influence in literature has been more felt by his contemporaries through the medium of these stories and their sequel—the group of astounding little romances collected under the head of *The Dynamiters*—than through the medium of his more popular and more ambitious romances. It is true that he brought to the writing of books, designed mainly to amuse boyhood, a purity and brilliancy of style that such themes had never before received, and in this way *Treasure Island* and *Kidnapped* may be looked upon as departures but they were only departures in the sense that their rendering was out of all ordinary keeping with their theme. The episodes described are rousing and romantic, but not remarkably unlike others that have been chronicled, though the language with which they are clothed is the most precisely beautiful in English. *The Master of Ballantrae* again had been much foreshadowed by Thackeray, *Prince Otto* has all the appearance of a study after George Meredith, and Scott and Dumas *père* were frequent sources of inspiration in *Catriona*. But in the marvellous *New Arabian Nights* the real Stevenson appeared, the personal seeker of wild adventure in unexpected places, the man for whom the north side of Leicester-square, a villa in Bayswater, and a private hotel near Charing-cross held possibilities as magical as any offered to the good Haroun al Raschid by the winding alleys of ancient Bagdad, or to the self-assertive Aladdin by the palaces of Pekin. For a certain class of readers there has died in Robert Louis Stevenson the supreme short story-teller.

The number of books this year has been as large or larger than in the previous season or two, and if no work of particular or startling interest has been forthcoming a general level of respectable production has been well maintained by the issues from most of our publishing houses.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6205 births and 3649 deaths were registered during the week ending Dec. 22nd. The annual rate of mortality in these towns, which had been 20·2 and 19·7 per 1000 in the preceding two weeks, further declined last week to 18·2. In London the rate was 17·4 per 1000, while it averaged 18·8 in the thirty-two provincial towns. The lowest rates in these towns were 11·3 in Plymouth, 13·7 in Derby, 14·0 in Croydon, and 14·8 in Huddersfield; the highest rates were 22·2 in Manchester and in Burnley, 22·6 in Liverpool, 24·2 in Norwich, and 26·7 in Preston. The 3649 deaths in the thirty-three towns included 392 which were referred to the principal zymotic diseases, against 467 and 428 in the preceding two weeks; of these, 139 resulted from measles, 70 from whooping-cough, 60 from diphtheria, 48 from "fever" (principally enteric), 40 from diarrhœa, 32 from scarlet fever, and 3 from small-pox. No fatal case of any of these diseases occurred last week in Leicester; in the other towns they caused the lowest death-rates in Croydon, Norwich, Plymouth, and Wolverhampton, and the highest rates in Bradford, Portsmouth, Leeds, and Gateshead. The greatest mortality from measles occurred in Portsmouth, Derby, Bradford, Leeds, Sheffield, and Gateshead; and from whooping-cough in Newcastle-upon-Tyne, Huddersfield, Halifax, and Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 60 deaths from diphtheria included 36 in London, 4 in West Ham, and 3 in Manchester. One fatal case of small-pox was registered in London, 1 in Liverpool, and 1 in Birmingham, but not one in any other of the thirty-three towns. There were 15 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 22nd inst., against 31, 32, and 22 at the end of the preceding three weeks; not one new case was admitted during the week, the number of admissions during the preceding three weeks having been 6, 7, and 3 respectively. The number of scarlet fever patients under treatment in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1931, against 2148, 2142, and 2034 on the preceding three Saturdays; 161 new cases were admitted during the week, against 228 and 187 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 338 and 358 in the preceding two weeks, declined again to 325 last week, and were 189 below the corrected average. The causes of 76, or 2·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Bradford, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Salford, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the preceding five weeks from 20·3 to 22·5 per 1000, declined again to 21·7 during the week ending Dec. 22nd, but exceeded by 3·5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·0 in Greenock and 17·7 in Paisley to 24·5 in Aberdeen and 25·8 in Perth. The 619 deaths in these towns included 54 which were referred to measles, 17 to whooping-cough, 11 to diarrhœa, 10 to diphtheria, 9 to scarlet fever, 6 to "fever," and 4 to small-pox. In all, 111 deaths resulted from these principal zymotic diseases, against 84 and 90 in the preceding two weeks. These 111 deaths were equal to an annual rate of 3·9 per 1000, which was 2·0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 12 to 32 in the preceding four weeks, further rose to 54 last week, of which 35 occurred in Glasgow, and 13 in Aberdeen. The 17 deaths referred to whooping-cough exceeded by 3 the number in the preceding week, and included 9 in Glasgow, 4 in Greenock, and 3 in Aberdeen. The fatal cases of diarrhœa, which had been 7 and 8 in the preceding two weeks, further rose to 10 last week, of which 4 occurred in Glasgow, 2 in Edinburgh, and 2 in Perth. The deaths from scarlet fever, which had been 12 and 11 in the preceding two weeks, further declined to 9 last week, and included 5 in Glasgow and 3 in Edinburgh. The 6 deaths referred to different forms of "fever" corresponded with the number in the preceding week, and included 3 in Edinburgh, where the 4 fatal cases of small-pox were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 169 and 151 in the preceding two weeks, further declined to 142 last week, and were 30 below the number in the corresponding week of last year. The causes of 43, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 21·2 to 27·1 per 1000 in the preceding three weeks, declined again to 26·5 during the week ending Dec. 22nd. During the past twelve weeks of the current quarter the death-rate in the city has averaged 23·3 per 1000 against 16·6 in London and 19·8 in Edinburgh. The 173 deaths registered in Dublin during the week under notice showed a decline of 4 from the number in the previous week, and included 22 which were referred to the principal zymotic diseases, against 14 and 18 in the preceding two weeks; of these, 7 resulted from "fever," 6 from small-pox, 5 from whooping-cough, 3 from diarrhœa, 1 from scarlet fever, and not one from measles or diphtheria. These 22 deaths were equal to an annual rate of 3·3 per 1000, the zymotic death-rate during the same period being 1·8 in London and 2·9 in Edinburgh. The deaths referred to different forms of "fever," which had been 2 and 4 in the preceding two weeks, further increased to 7 last week. The fatal cases of small-pox, which had been 6 and 5 in the preceding two weeks, were 6 last week. The 5 deaths from whooping-cough showed a further increase upon those recorded in recent weeks, and the 3 fatal cases of diarrhœa corresponded with the number in the preceding week. The 173 deaths in Dublin last week included 34 of infants under one year of age and 35 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons showed a decline from those recorded in recent weeks. Four inquest cases and 2 deaths from violence were registered; and 62, or more than a third, of the deaths occurred in public institutions. The causes of 18, or more than 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

INDIA AND THE INDIAN MEDICAL SERVICES.

IT is notified that the undermentioned officer, Army Medical Staff, expected from England for duty in India, has been posted to the Bombay Command:—Surgeon-Major Rowney, in succession to Surgeon-Captain Thacker. The following postings are directed:—Surgeon-Major J. H. Nicholas, to the Madras district; Surgeon-Captain E. D. Bringhurst-Farmar, to the Medical Charge of the Station Hospital, Mallapuram; Surgeon-Captain G. B. Russell, M.B., to the Rangoon district; Surgeon-Captain C. W. H. Whitestone, M.B., to the Belgaum and Bangalore district; and Surgeon-Captain J. H. E. Austin, to the Mandalay district and Chin Hills Command. The undermentioned Surgeon-Lieutenants appointed to the Bengal Establishment have reported their arrival at Bombay:—George Ramsay, David Waters Sutherland, William Selby, Thomas Arthur Granger, Harold John Kinahan Bamfield, John Weymiss Grant, Arthur Henry Moorhead, William Davey Hayward, Archibald William Forbes Russell, and William Elmsley Scott-Moncrieff.

NAVAL MEDICAL SERVICES.

The undermentioned Staff-Surgeons have been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet:—William Henry Patterson, William Edward Bennett, and Charles Lyon Vasey.

The following appointments are notified:—Staff-Surgeons: W. S. Lightfoot to the *Sybille*, and J. Crowley to the *Lion*. Surgeons: L. Bidwell and W. S. Stalkartt, to be lent for three months' study at a metropolitan hospital; T. W. Philip to be lent to the *St. Vincent*; G. G. Borrett to the *Pembroke* (additional).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Frederick Enos Fenton, 1st Middlesex Volunteer Rifle Corps, to be Surgeon-Major.

THE VOLUNTEERS.

An important change is notified in the recent issue of Volunteer Regulations, 1894. The Medical Staff Corps Badge, otherwise known as the Geneva Cross, is in future only to be worn by the Brigade Bearer Companies and the Volunteer Medical Staff Corps. Regimental stretcher bearers, but only when parading as bearers, are to wear an armlet of special pattern, with the letters S.B. in red upon it, as in the regular army. This change is doubtless necessary in order to conform to the terms of the Geneva Convention and also possibly to increase the number of Brigade Bearer Companies, of which many are still wanting to render Volunteer Infantry Brigades at all fit to take the field. The long-service medal for Volunteer officers will, it is expected, be issued in January, 1895.

THE LATE CHOLERA OUTBREAK IN A NATIVE HOSPITAL AT BOMBAY.

The Surgeon-General with the Government of Bombay forwarded a report to that Government in August last on the outbreak of cholera among the patients and servants of the Jejheebhoy Hospital which has only recently been published. The report is of a searching and exhaustive kind, and not only sets forth and analyses all the circumstances connected with the outbreak, but it enters very fully into the sanitary state of the hospital and premises. It is a thoroughly practical document, and brings to light a large number of defects in almost every direction in connexion with that institution, those points more immediately requiring attention and remedy being summarised towards the end of the report. We may say that, among other things, it was found that the drain-pipes and water-pipes lie side by side and almost touching one another. In one respect, however, the report is disappointing, in that it indicates a clue to explaining the probable or possible cause of the outbreak without following it up to a logical conclusion. The Parsees enjoyed a complete immunity from the outbreak in question, although they were similarly circumstanced to the other patients in the hospital in all respects save one—viz., they had a separate cooking-room and a separate cook for preparing and distributing their food. The Surgeon-General, owing to this and other circumstances, very naturally suggests that the channel of infection of those attacked was most probably through the food or cooking. The Government have desired that a further and searching inquiry should be instituted in this direction, but we are afraid that the inquiry will be too late to be of any good. It should have been undertaken whilst all the facts were still fresh in the memory of those concerned.

SOLDIERS AND THE LATE RAILWAY DISASTER.

We are very glad to notice that among those who rendered most valuable aid during the late terrible railway disaster in Cheshire several soldier passengers belonging to the Dragoon Guards and Royal Welsh Fusiliers were conspicuous. Sergeant Edge, of the Medical Staff Corps, is stated to have performed splendid services in attending to the injured. His knowledge and training in army hospital and field work no doubt

enabled him to render most effective aid, and we congratulate him on the spirit and devotion he displayed on the occasion in question.

Inspector-General William Harris Lloyd, M.D., Plymouth Hospital, has been appointed Hon. Surgeon to Her Majesty, in the vacancy created by the death of Inspector-General of Hospitals and Fleets Richard Denton Mason, C.B.

The good service pension of £100 a year, vacant by the death of Inspector-General of Hospitals and Fleets R. D. Mason, C.B., has been conferred on Inspector-General of Hospitals and Fleets Sir J. Jenkins, M.D., K.C.B.

Correspondence.

"Audi alteram partem."

"THE POSITION OF THE THEORY OF EVOLUTION."

To the Editors of THE LANCET.

SIRS,—May I trespass once more upon your space for the purpose of replying briefly to those criticisms upon what I wrote on the subject which have appeared? The result as to the "position" of the theory amongst our ranks is *nil*. It maintains its character, so well described as "a confused and indefinite movement of the mind of the age." It must be because this character so well describes the theory of evolution that the heads of our profession refrain from discussing it, an expectant attitude being the order of the day. Dr. Campbell believes that the majority of our profession who have paid the greatest attention to the theory will endorse the opinion of the professed biologist. Upon this one may remark in passing that the opinion of the professed biologist of 1884, 1894, and 1904 may differ *toto cælo*, however much the solid facts of science stand firm as the rocks in mid ocean. Surely, in the easy acceptation of this theory from the hands of biologists, the appeal to great names, and readiness to receive *ex cathedrâ* statements of opinions, there lies danger to truth. It is probable the majority of our profession will endorse these opinions, but it is most doubtful if those who have paid the greatest attention to the theory from other standpoints, as well as that of biology, will do so. If it be true that there is "nothing but what is beautiful in Herbert Spencer's ethical code," advanced with all the ability of a great mind with learning, and in stately language, we may not judge that code by his handling of it and "official" statement of its laws. Mohammedanism is not to be judged by the numerous beautiful passages in the Koran, though the book itself will badly bear thorough perusal, but by the evidence of that desolating and hopeless system in the lives of the millions of superstitious and fanatical followers of the Prophets. As to the beauty of Mr. Herbert Spencer's ethical code, I would quote one sentence: he is speaking of good conduct as tending to "the general end of self-preservation," and this is further explained as "that increased duration of life which is the supreme end." It would seem that the time is coming when the theory of evolution must be maintained at all costs, and when its motto will run, "Ruat cœlum, vivat Darwinismus."

Mr. Roger Williams soon leaves the point at issue for a digression with an airy begging of the question. "Once established, a theory of this kind will always be believed until it can be shown to be false, or until something better has been devised." "Lightly come, lightly go," would sum up this position; and I must protest once more against the view he puts forward that the various branches of science have independently one after another adopted this theory. Thirteen years ago it was said, in the presence of a distinguished and scientific assemblage, by a great teacher, to be no longer a hypothesis, but a "historical fact." The most that its advocates can claim for it now is that it is a working hypothesis, and one loosely adopted in certain branches of science. If this be so, it is evolution in the wrong direction applied to the theory itself. Dr. Gilchrist also maintains that the various branches of science have adopted this theory. By way of example, I would refer to palæontology, geology, and anthropology very briefly, saying in passing that in physics Lord Kelvin is against evolution, and that by history I mean as much as, or more than, Dr. Gilchrist seems to mean. On a widely-reaching doctrine such as this one can but take the teachings of accredited teachers in various departments, watching carefully to see what basis of fact underlies those teachings. Let us hear Sir William Dawson on palæontology. "In point of fact ..... the general testimony of palæntology is, on the whole, adverse to the ordinary theories of evolution, whether applied to the vegetable or the animal kingdom." This does not look well for the reconciliation between palæontology and evolution pronounced essential by Professor Huxley in 1883. Anthropology, with the steady if small light thrown upon it by geology, is no less adverse. "Man is of recent introduction on the earth;" "only within a few thousand years does our globe seem to have been fitted for its highest tenant"; "the evidence for this is to be found in any text-book on geology." Seeing that geologists allow no more than a paltry period of 10,000 to 7000 years—i.e., since the Glacial Period—during which man has existed on this globe, the theory of evolution, as applied to man, is in great straits. In such a matter the proverbial difficulty of proving a negative is admitted, but few geologists are prepared to put back the origin of man behind the glacial age. Now no fossil-men having ever come to light of earlier date than the Canstadt and Cro-Magnon races of Western Europe, the so-called palanthropic races, a serious dilemma confronts the evolutionists, one which the imaginative faculty of Haeckel alone could meet with some bold inventive stroke of genius. Anthropology also, enlightened by geology, proves that these earliest known races possessed a cerebral and physical development equal, if not superior, to our own. Broca measured the skull of one of the Cro-Magnon race and found its cubic capacity 119 centimetres, more than the average of 125 modern Parisian skulls, the height of some of the skeletons examined being about seven feet. During the last ten to fifteen years the "heir of all the ages" in the persons of the recruits for the French, German, Austrian, and Italian armies has shown an increased percentage of 7 to 23 per cent. rejected for being below the standard height. I did venture to ask, "Is there a grain of truth in this theory?" though not in the connexion noted by Dr. Gilchrist, for that is the real question at issue. It is not a question of more or less truth, but of momentous truth or nearly as important error. I did not "ask Professor Huxley to conciliate evolution and ethics." He virtually pronounced their divorce in his Romanes Lecture. My point was that Professor Huxley, with his conspicuous courage and candour, was giving away the case of evolution in a vital point. With the question of sin, conduct good and bad, "the dread problem of evil," the most insistent of the eternal verities of our being, the theory of evolution has no harmony and can give no help. Here the useful method of *reductio ad absurdum* comes in, as well as in the recent teachings of Professor Haycraft on "Darwinism and Race Progress," where, from the evolutionist point of view, sanitary advances and race progress are shown to be hitherto at variance. It is a mere case of arguing in a circle when Dr. Gilchrist maintains that the *primâ facie* argument for the parasitic origin of disease rests upon the idea that man has not yet emerged from the struggle for existence against inferior forms of life. How can a precise theory such as the former be *primâ facie* supported by the latter, which is an improved hypothesis, an idea? The facts will not agree with Dr. Gilchrist's suggestion that the discoveries of M. Pasteur and Sir Joseph Lister owe their inspiration to the biological teachings of Darwin. The names of Pasteur and Lister are undoubtedly linked together in the imperishable honour of the Germ Theory of disease. But the first paper of M. Pasteur on fermentation appeared in 1857, two years before the "Origin of Species" was published, and the Germ Theory was first unfolded by Sir Joseph Lister in 1867, its foundations being laid in the solid rock of Pasteur's facts, and not in the shifting sand of Darwin's theories. I regret not to have read the works of Spinoza, but the quotation Dr. Gilchrist gives is so damaging that one feels inclined to say with Gratiano, "I thank thee ..... for teaching me that word." He says: "What we censure in men we tolerate or even admire in animals, and as soon as we are aware of our mistake in assigning to man a power of free volition, our notion of evil as a positive thing will cease to exist." We have hardly now, among the advanced teachers, surpassed this seventeenth-century utterance! One turns with relief to the teaching of a greater philosopher than Spinoza, even to Kant, who taught that the freedom of the

human will is the grand essential to morality, and whose teaching was fitly summed up in his epitaph: "The starry heaven above me, the moral law within me."

I am, Sirs, yours faithfully,

WALTER KIDD, M.D.

Montpelier-row, Blackheath, Dec. 22nd, 1894.

"DOCTRINE" OR "DISCIPLINE."

To the Editors of THE LANCET.

SIRS,—As one accustomed to the belief that language possesses some value as an exponent of thought, and not merely as an instrument for concealing it, I have read with interest Dr. Creighton's letter in your last issue on the subject of his use of the word "discipline." It strikes me as curious that there should be any question of a "German word" or of "translation" or of "the meaning of the original German," for the simple reason that the word "doctrin" is not German at all, but Latin. The nearest equivalent to it in German is, I think, "lehre," and it seems obvious that Professor Hirsch only used a Latin word because no German one entirely satisfied his requirements. An Englishman in similar case, or who was imperfectly acquainted with the resources of English, would be likely to fall back upon some verbal Caliban, some monstrosity misbegotten of a classic tongue; or, if he eked out his poverty by a genuine foreign word, he would so far glory in his shame as to call attention to it by italics. In Germany a different custom prevails. It is not uncommon for a German writer to take a Greek or a Latin word, to bestow upon it a German termination, and then to use it as if it were part of his own language. For example, in German surgical writing injuries are frequently referred to as "Traumen," and I remember a very droll consequent mistranslation which may be found, if I am not mistaken, in one of the publications of the Sydenham Society. The German writer described a case of brain disease, the subject of which had sustained injuries on his head, and the word "Traumen" was used to denote these injuries. The slenderly equipped translator found "Traum" in his dictionary, and, without regard to its plural, he boldly converted the injuries into "dreams." Not seeing how these could have been "on" the head, he altered the preposition as well as the noun, and wrote that the patient "had suffered from dreams in his head." The English, French, Italian, and Spanish languages are all of them the legitimate possessors of words derived from "doctrina," and the several derivatives have in time acquired various shades of meaning. In German there is nothing of the kind. The translator in search of the meaning of "doctrin," therefore, has to think of the meaning of a Latin word, and not of that of a German one, from which point of view, on this occasion, the selection of "discipline" as an equivalent seems to me to have been the reverse of fortunate. It is possible of course to explain or elucidate the meaning of a word by the assistance of another from the same language, but it is not possible to "translate" in this manner. In Dr. Creighton's version there is not translation, but substitution, which is a totally different thing. In English both "doctrine" and "discipline" have come to be used in senses widely different from those which once they bore; but in Latin their meanings are hardly distinguishable from one another. The best dictionary which I have at hand gives for "doctrina" the explanation "teaching, instruction, or the knowledge imparted by teaching"; and, for "disciplina," "instruction, teaching, learning, knowledge, science." Dr. Creighton himself points out that his "substitution," as I prefer to call it, misled Mr. Shirley Murphy with regard to Professor Hirsch's meaning, and I think the result is not surprising. A real translator would have gathered from the context the sense in which the word "doctrin" was used, and would have expressed this sense in words calculated to convey it with accuracy. But the power of translation is probably the last of literary attainments, and it requires not only a competent knowledge of the language translated from, but an absolute mastery of that which is translated into.

I am, Sirs, your obedient servant,

Harley-street, W., Dec. 24th, 1894. R. BRUDENELL CARTER.

"THE STUDY OF HEREDITY."

To the Editors of THE LANCET.

SIRS, In the leading article on the above subject in THE LANCET of Dec. 8th you touch upon what is perhaps the most momentous question in pathology: the influence of heredity in disease. All references to this subject which I have met with appear to be wide of the mark. Writers are continually endeavouring to assess approximately the influence of heredity in the causation of various diseases: one disorder is said to be inherited in 10 per cent., another in 20 per cent., and so on. This implies a fundamental misconception both of heredity and of disease. All diseases are hereditary. In order to think clearly on this subject we must ever remember that life is an interaction between the individual and his environment, and that disease, which is an abnormal mode of life, must therefore consist of an abnormal interaction between the two. In setting forth the causation of disease both factors—namely, the individual, or, as we may say, the structure, and the environment—must be taken into consideration. To neglect the former is not only logically but practically unjustifiable, since the nature of the structure determines whether any particular environment shall or shall not lead to an abnormal interaction. But what determines structure? It is almost wholly determined by heredity, which therefore cannot be eliminated from the causation of any disease. To illustrate this point after the Socratic method:—A. You say all diseases are hereditary: do you hold that such a disorder as fleabite is?—B. Most certainly. A. This must be mere logical quibbling.—B. Not at all. Give me an instance of a hereditary disease. A. I should say that phthisis is one of the most markedly hereditary of all diseases.—B. And what is phthisis due to? A. Tubercle.—B. And what causes tubercle? A. A parasite.—B. How then is tubercle inherited? A. Through an inherited inability to cope with the tubercle parasite.—B. Very good. You see that in the two diseases we are discussing the environment cause is a parasite, the lesion in the one case being a wheal and in the other a tubercle, and that the development of either depends not merely upon the presence of the specific parasite but upon inability to cope with it. This inability is in each case equally inherited, and therefore the one disorder is as much inherited as the other. A. I am obliged to confess that, logically, the two cases seem parallel as regards the influence of heredity in causation; nevertheless, your conclusion appears to me to be too much founded on logic-chopping to be accepted by a practical pathologist. Such abstract sciences as logic and psychology are well enough in their place, but in this age of experiment we want less visionary, more tangible conclusions.—B. Suppose that the flea, like the tubercle parasite, were invisible, and further, that a comparatively small section of the community were susceptible to its influence—how would you account for the constant appearance of wheals in the members of this section? A. I should attribute it to constitutional peculiarity.—B. To some peculiarity in the organisation or structure of the individual? A. Yes.—B. And you would acknowledge that heredity played an important part in causation if you found mother and child liable throughout life to these wheals? A. I begin to see your meaning. We lose sight of the influence of heredity in fleabite, first because the environmental causation is so obtrusive, and secondly because so many are susceptible to it; whereas, if it were invisible, and if, further, it were capable of affecting a few only, the hereditary factor would stand out clearly. You force me to admit that fleabite is every bit as hereditary as phthisis. I still see, however, many difficulties against accepting the dogma that all diseases are hereditary, but time presses and I shall refer to one only. I have instanced phthisis as an emphatically hereditary disease. Now it seems to me that it cannot always be inherited. When an anthropoid is brought from its tropical home to Europe it almost invariably dies from consumption, though we may fairly assume that it has a clean ancestral chart in respect of this disease. If, then, there is no family history of phthisis in such a case how can we speak of the disease as inherited?—B. Again, my friend, you are losing sight of the fact that disease is a two-sided process; you are thinking of it as an entity which can be bottled up and which is bodily transmitted from parent to offspring. You, yourself, admitted that the hereditary transmission of phthisis is due to the inherited incapacity to cope with the specific parasite. Whether the ancestors of the phthisical individual have, or have not, suffered is a matter of accident and does not affect the influence of heredity. Suppose a European to have lost both his parents through acute tuberculosis and that he himself develops tubercle in a mild and chronic form—in such a case, though the tendency to the disease is slight, you regard it as hereditary because of the family history. Why, then, deny the influence of heredity in the case of the anthropoid (whose inherited incapacity to cope with the

specific parasite is far greater) simply because its ancestors do not happen to have suffered from the disease? A. You compel me to admit the soundness of your reasoning. For the same reason, if a Scotch crofter who had migrated to London developed gout you would regard the disease as inherited even though none of his ancestors suffered from it?—B. Precisely.

In conclusion, Sirs, allow me to say that I do not for one moment wish to undervalue the importance of the various points you mention in the article referred to: my sole object in writing this is to emphasise the fact that all diseases are hereditary. I believe that this will one day be accepted as a fundamental axiom both in pathology and sociology.

I am, Sirs, yours faithfully,

HARRY CAMPBELL.

PHTHISICAL PATIENTS IN THE ORANGE FREE STATE.

To the Editors of THE LANCET.

SIRS,—Can you afford me space to protest against a practice which is very commonly carried out at present? I refer to patients in the very last stage of phthisis being sent out here with the most confident assurance from their medical advisers (so they inform us) that they will soon get quite well, be fit to work, and get it. During the last two months I have examined three men who had just arrived from Great Britain. They were all in the very last stage of the disease. In each case both lungs were riddled with cavities, the larynx was extremely swollen and ulcerated, and there were albuminuria, diarrhœa, high temperature, frequent, easily compressible pulse, and marked emaciation. One lived about six weeks, one hardly survived one week. We have dozens and dozens of similar cases sent out every year. The last case I saw hardly lived one week. He had been under the care of a distinguished physician at a London hospital for eighteen months. During that physician's absence his substitute saw this man, and assured him in the strongest possible language (so the patient's brother assures me) that if he came here he would soon get quite well. Surely it does not require medical knowledge to know that no climatic change can be of any service to such a poor fellow. Common sense should tell one that if a man's viscera are almost entirely destroyed by tuberculous disease neither the beautiful climate of the Orange Free State nor any other country can restore them. But that is not all. These patients arrive here almost penniless. They spend their last sixpence in getting here. Often friends have subscribed just enough to pay their travelling expenses. Many have not even money enough to take them beyond the coast. They are told that as soon as they arrive here they will be able to work and will get it. It cannot be too widely known that this is erroneous. The amount of work is limited, and it is of little use expecting patients to derive benefit from climatic change unless they have sufficient money to exist upon, at any rate for the first year. Often a patient would have done well if he had had money enough to get comforts, to allow him to live in the open air all day, and to preserve him from fretting. Again and again subscriptions are made here for penniless invalids to send them home or to tide them over a period of time till they are fit to work, and it is very hard upon the residents here, but to their credit, be it said, they are never appealed to in vain. I wish some kind friends at home would establish a place here for some poor patients. I believe that skilled workmen who are strong enough to work will always get it; but there are at least three times as many clerks and shop assistants arrive as there is work for. The cost of living varies from £6 to £20 per month. In conclusion, may I beg of the profession to send us the cases in the earliest stage, and in this glorious clime they will soon be restored to health and strength?

I am, Sirs, yours faithfully,

J. WM. DALGLIESH, M.D.

Bloemfontein, Orange Free State, South Africa, Nov. 3rd, 1894.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital and the Musical Festival.

A SPECIAL MEETING of the general committee of the hospital was held on the 19th inst. for the purpose of receiving a deputation from the Orchestral Committee of the festival. After payment of expenses a cheque for £4500 was handed to the hospital authorities. The chairman, Mr. John Phillips, congratulated the members of the deputation upon the success attained by the recent festival, and expressed his thanks for such a handsome donation. He said that from the thirty-eight festivals held since 1768 the hospital had received £132,065; in addition to this two sums of £1000 and £1200 had been spent upon improvements in the town-hall between 1837 and 1855. The amount given this year has quite fulfilled the expectations of those who worked so actively and loyally in so good a cause.

A Victim of Vanity.

An inquest was held lately by Mr. Hooper on a girl aged seventeen years whose death was attributed to drinking vinegar and other compounds for the purpose of becoming thinner and paler. She was found dead in bed from perforation of the stomach from abscess. The evidence showed that a number of irritating substances had been constantly taken for the purpose of reducing her appearance and figure to slighter proportions. The end showed the futility of tampering with nature's laws.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medico Chirurgical Society of Edinburgh.

AT a meeting of the Medico-Chirurgical Society of Edinburgh, which was held on the 19th inst., Dr. Urquhart read a paper on two cases of Raynaud's disease which had come under his care at Murray's Royal Lunatic Asylum, Perth. One of these terminated fatally, and the pathological appearances were carefully described. In the other case, a female, improvement followed confinement to bed for three months, so that she was able to get up, but the discoloration of the feet returned in a fortnight. Both patients had hæmatoma auris. Dr. James Ritchie contributed a paper on a case of intestinal obstruction attributed to a septic condition of the bowels, with consequent paresis of the intestinal walls. Ultimately malignant tumour was diagnosed and the general condition deteriorated. An operation was resolved on, but before it was performed the patient became suddenly worse and died of heart failure. At the necropsy a flattish mass about the size of a dried fig was found in the great omentum, and at the splenic flexure there was a hard mass which completely encircled the bowel and caused great narrowing of its lumen.

Rabies in Glasgow.

Last week a dog was captured in the streets of Glasgow after it had bitten a number of people. Fortunately it was not destroyed, but kept securely in confinement, under the watchful eye of Professor McCall of the Veterinary College. For some days the dog showed little sign of disease, but on Sunday last it became worse and died to-day from quite unmistakable rabies. The Health Committee at once met and took steps to find those who had been bitten, who, so far as has been ascertained, are eight in number. These eight patients set out to-night (Dec. 25th) for the Pasteur Institute in Paris, Dr. A. K. Chalmers, the assistant medical officer of health, being in charge of the party. The rabies order with regard to the muzzling of dogs has been reissued, in view of this outbreak of rabies within the city. This will, however, be of little value unless the authorities of the adjoining counties issue a similar order.

Dec. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Dublin for November.

AS compared with the previous month the mortality caused by small-pox was about equal; but there was a decided decrease in the fatal cases of typhoid fever, and a large decrease in the number of deaths ascribed to diarrhœa and dysentery. There was a marked increase in the fatality due to whooping-cough. During the four weeks 117 cases of small-pox were admitted into hospital. The death-rate from all causes was 4·5 per 1000 below the mean rate for the corresponding period in the previous ten years.

Isolation Rooms at Dispensaries.

The Dublin Sanitary Association, not for the first time, has drawn attention to the necessity of having isolation rooms at the Dublin dispensaries. During the epidemic of small-pox, which shows signs of increasing, a proposal of the kind should be adopted without demur. Letters have been addressed to the Public Health Committee of the corporation, the North and South Dublin Unions, and the Local Government Board in the matter, and it is to be hoped that no time will be lost in carrying out the suggestion.

Death of a Centenarian.

Mr. Robert Potts, of Kilmore, Drum, county Monaghan, died on the 18th inst. aged nearly 104 years. Deceased was born on Feb. 14th, 1791, and in less than two months would have been 104 years old.

Presentation to Dr. Morrison of Coleraine.

On Friday, Dec. 18th, a deputation representing the people of Aghadowey dispensary district attended at Bellevue House, Blackhill, Coleraine, and presented Dr. Hugh Smith Morrison, medical officer of the district, with an illuminated address and purse of sovereigns, and Mrs. Morrison with a handsome and valuable piece of silver plate. The proposal to present Dr. Morrison with a token of the esteem in which he is held took definite shape after the recent inquiry by Dr. Clibborn, medical inspector of the Local Government Board, into certain alleged irregularities in connexion with vaccination in the dispensary, and for which, in the opinion of his friends, Dr. Morrison was not responsible.

The late Andrew McBride, L.R.C.P. Edin., M.R.C.S. Eng.

I regret to have to report the death of Mr. McBride, which occurred at his residence, Newry, county Down, on Dec. 23rd, from congestion of the lungs, for which he was attended by Dr. Crossle. He was born at Knock House, Rathfriland, in 1834, and after a preliminary education at home he studied at the Ledwich School of Medicine, Dublin, and afterwards at the College of Surgeons. He held the diplomas of L.R.C.P. Edin. and M.R.C.S. Eng. On completing his studies he was appointed dispensary medical officer at Poyntzpass, county Armagh, and in 1861 he resigned, came to Newry, and in the same year was elected dispensary medical man of No. 1 district, so that he has held the position for thirty-four years. Mr. McBride was the oldest dispensary medical man in the Newry Union, and in addition to being in good private practice he was medical attendant to the Royal Irish Constabulary. Mr. McBride was a great favourite with the poor, to whose cases he was always attentive.

We understand that Dr. J. Lorrain Smith has been appointed to the lectureship on pathology, at Queen's College, Belfast, vacant by the resignation of Dr. W. H. Barrett.

Mr. Allan H. Hanley, district medical officer, West Africa, has been admitted a Fellow of the Royal College of Surgeons of Ireland.

Dec. 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Pathology of Infantile Paralysis.

IN a recent number of the *Wiener Klinische Wochenschrift* Dr. E. Redlich publishes an important contribution to this subject, the tendency of which is to support the view that in so-called acute anterior poliomyelitis the process is to be regarded, not as confined to the ganglion cells, but as an acute inflammation affecting chiefly the anterior horns of the spinal cord. The paper consists mainly in a description of the cord in a case which terminated fatally a few days after the onset of the symptoms, and the following account of it is taken mainly from an abstract of the paper which appears in the *Neurologisches Centralblatt* of Dec. 1st. The patient was a child aged five months, previously healthy, who became restless, with a high temperature. On the fourth day after the commencement of this illness there was weakness of all the limbs, with loss of voice. Loss of knee-jerks, slight sensory impairment, difficulty in breathing, and transitory difficulty in swallowing were also present. The cranial nerves, except so far as was manifested by a doubtful unilateral weakness of the face, showed no alteration. There was slight feverishness. On the ninth day of the illness there was temporary cessation of respiration, which was repeated on the tenth day, and from which the child did not recover. An examination of the spinal cord showed the presence of an acute inflammatory process affecting the cord throughout its entire length. This process did not confine itself to the anterior horns, although these were chiefly affected. It involved also the remainder of the grey matter and even the tracts of white matter, in which there were small foci of inflammation. The changes in the anterior horns were most intense in the lumbar enlargement, less so in the cervical swelling, and least of all in the dorsal region. The ganglion cells showed the marks of acute degeneration. Outside the anterior horns, in the posterior horns, in the central substantia gelatinosa, and in a part of Clarke's column, and also in the white matter—especially the lateral and anterior tracts—there were found small areas of inflammation. In the posterior columns only one such area could be discovered. These areas in the white substance seemed to depend upon acutely inflamed vessels, and although they were in the vicinity of the anterior horns they did not appear to be connected with them. The vessels outside the cord also, especially the artery of the anterior fissure and its branches to the anterior horns, were similarly affected with acute inflammation. Similar foci of inflammation were found in the medulla oblongata and the basal structures similarly grouped around inflamed vessels, but the cortex cerebri seemed to be free from them. The peripheral nerves, especially the phrenic and inferior laryngeal, showed very severe degeneration, and the muscles showed evidences of fatty degeneration. It is, of course, quite open to doubt whether this case was really one of the ordinary type of infantile paralysis. The appearances in the cord suggested the presence in the blood of some toxic material affecting the vessels, and simultaneously or secondarily the structures also of the spinal cord.

Dec. 22nd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Serum Therapeutics in the Vienna Hospitals.

A DISCUSSION on the antitoxin treatment in diphtheria took place at the last meeting of the Vienna Society of Physicians. It was opened by a report by Prof. Widerhofer on the results obtained by the serum therapeutics at the St. Ann Hospital for Sick Children. The mortality from diphtheria at this hospital from 1862 till 1894 varied between 32·3 and 71·9 per cent. The incidence and mortality from diphtheria were generally highest in the months of October, November, and December. In October[1] to December, 1891, the mortality was 34·2 per cent., and in the corresponding periods of 1892 39·0 per cent.; in 1893 it was 44·0 per cent.; and in 1894 only 24·0 per cent. One hundred cases of diphtheria were subjected to the treatment during this period. Among them 8 were one year of age, 7 two years of age, 17 three years of age, and the others were between four and six years of age. The patients were kept in hospital as long as Löffler's bacillus could be found. All diphtheritic patients admitted to hospital were injected, even if the admission took place later than on the fourth day of the illness. Patients who died from lobular pneumonia two weeks after they had left the hospital were also grouped with the statistical tables. Of these 100 cases 23 died, 74 recovered, and 3 remained under treatment. On the day of the meeting one of the latter who had had laryngeal diphtheria died from a recent attack of diphtheria. The mortality was, therefore, 24 per cent., while it had been 52·6 per cent. during the nine preceding months of the year. As regards the ages—of 8 patients, 5 died one year old; of 7 patients, 3 died two years old; of 17 patients, 6 died three years old; and the ages of the other patients who died ranged from four years to six years. The post-mortem examination in the 23 cases gave the following results: descending croup, 12 cases; sepsis, 5 cases; diphtheria with œdema glottidis, 1 case; uncomplicated diphtheria, chiefly affecting the nasal cavity, 1 case; scarlatina and bronchitis capillaris, 1 case; measles with catarrhal pneumonia, 1 case; pulmonary tuberculosis with empyema, 1 case. As regards symptomatology, twelve hours after the first injection in uncomplicated cases of diphtheria the yellowish exudations became white, like milk, and the membranes became loose. This process could also be observed to go on in the bronchi in cases of descending diphtheria; at the same time, the œdema of the neck decreased

[1] The antitoxin treatment was introduced in October.

and the swollen lymphatic glands became smaller. The general condition and feeling of the patients were likewise markedly improved after the injection. The pulse-rate, sometimes as high as 160 beats per minute, was lowered to the normal after the first injection. The nasal diphtheria was also improved after the injections. There were 18 cases of nasal affections among the fatal cases, and 41 nasal affections among the cases which recovered. The renal complications occurred quite as often as they did among non-injected cases. Post-diphtheritic paralyses were not more numerous in the injected cases than in non-injected cases. The injections were made with Behring's serum No. 1.

Dec. 26th.

Obituary.

CHARLES BLAIR WILSON, M.D. EDIN.

THE English-speaking community in Florence has lost an able and accomplished young practitioner in Dr. C. B. Wilson, who died in the early morning of Thursday, the 13th inst. He had been engaged in active work up to the Saturday preceding, and had indeed for some days before been himself in need of medical care. But professional duty had always paramount claims upon him, and he struggled on through his daily visits till his strength failed him utterly. He took to bed on the 8th inst. with all the symptoms of pneumonia in its gravest form, and died five days afterwards in spite of everything that skill and assiduous tendance could do. Dr. Wilson was born in Florence, but educated in Edinburgh, first at Fettes College and subsequently at the University, where he entered at once on the medical curriculum. In 1887 he qualified as M.B. and C.M., and three years later proceeded to the M.D., which he obtained with high honours. Before this he had acted as assistant to his father, Dr. William Wilson, for many years a leading practitioner in the Tuscan capital, and quite lately, on that gentleman's definite withdrawal from active duty, took over his entire *clientèle*. The responsibility thus thrown on one so young was by no means light, but he proved quite equal to it in every respect, retaining the confidence he inspired and making a friend in every patient. His Edinburgh training, which included a long term as resident physician in the Royal Infirmary and surgeon in the Maternity Hospital, was rich in clinical experience, and this he enhanced, not only under his father's eye, but in constant attendance at the clinique of the Florentine School—particularly in visits to the wards of the Santa Maria Nuovo. In consultation he was eminently judicious and circumspect, his Italian colleagues being uniformly impressed with his powers of clear statement, the appropriate outcome of a professional mind at once earnest, painstaking, and genial. For his command of the Tuscan idiom he was, of course, indebted to his early upbringing in Florence; but for his trained lucidity of thought and its well-ordered expression he was under equal obligation to that most useful adjunct of the Edinburgh school, the Royal Medical Society. Dr. Wilson had early opportunity of showing his professional aptitudes in more than one wave of disease which swept over Florence. The influenza epidemic found him peculiarly vigilant as to its novel indications, and no less intelligent as to their meaning. The neurotic note it struck in the vast majority of cases was certainly not lost upon him, and had its due effect in his practice. Diphtheria also claimed his special interest, and his conception of its etiology, development, and treatment revealed the genuine physician. Rarely, indeed, has a professional career been opened with greater promise or cut short amid more general sorrow. On Sunday, the 16th inst., in the Church of the Holy Trinity, in whose rehabilitation he took a zealous and efficient part, the Rev. R. B. Harrison made touching allusion to the loss sustained, not only by the congregation, but by all English-speaking Florence, in the death of their "beloved physician"; and on the following day he was laid to rest in the Allori Cemetery in the presence of mourners representing every class of society, down to those of its very poor, who never appealed to his head or heart in vain.

DAVID STUART, M.B.; C.M. EDIN.

DEEP regret will be felt by all who knew him at the death of Dr. Stuart, who until last July held the office of assistant to the Professor of Pathology in the University of Edinburgh. Compelled by ill-health to resign the appointment, which he had held for three years, it was hoped that change of climate would speedily restore him; but the sudden onset of tuberculous meningitis caused his death at Bordighera on the 20th inst. For some years, dating from an early period of his student life, his ability and reliable character had led to several junior appointments, and subsequently to the appointment of resident physician in the Royal Infirmary. A quiet, reserved, and somewhat shy man, he yet proved a most able teacher, and his upright character, readiness to help all in difficulty, and great kindness won for him the respect and affection of all who knew him, whether students or others. His keen zest for work, the thoroughness of all he did, and his great diligence and ability, marked him as one eminently capable of advancing medical science. For a considerable time he had been engaged on the comparative study of the supra-renal bodies in health and disease—a research which had already led to important new observations. So eager was he to complete the research that he continued his work after he was invalided, and even to within a short time of his death. There can be little doubt that the many and heavy duties of his post, his dogged perseverance in research, and the constant readiness to help all who needed his aid in any way overtasked his strength. There can be no doubt that the deepest and most widespread feeling in the University is one of personal loss.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At a recent examination the following candidates passed in the subjects indicated:—

Surgery.—V. J. Batteson, London Hospital; T. D. Bell, University College; G. Downes, Dublin; J. Mace, Leeds; E. G. Moon, St. Mary's Hospital; W. G. Mumford, Guy's Hospital; A. E. Sears, London Hospital; S. B. Stedman, St. Thomas's Hospital; L. F. F. Winslow, Charing-cross Hospital; and A. B. Wright, London Hospital.

Medicine, Forensic Medicine, and Midwifery.—F. S. Flint, King's College Hospital; A. H. H. Huckle, Guy's Hospital; G. H. Lansdown, King's College Hospital; W. G. R. Macauley, St. Thomas's Hospital; E. H. Read, London Hospital; R. M. Russell, London Hospital; and F. S. Tidcombe, St. George's Hospital.

Medicine and Forensic Medicine.—E. B. Barber, London Hospital; and W. D. Macdonald, Guy's Hospital.

Forensic Medicine.—J. W. Clegg, Manchester; H. F. Forty, Middlesex Hospital; R. Irvine, Belfast; and B. S. Maukar, London Hospital.

Midwifery.—F. A. M. Flegg, St. Thomas's Hospital; and C. W. Moorshead, Guy's Hospital.

To Messrs. Batteson, Barber, Bell, Flegg, Lansdown, Flint, Macauley, Macdonald, Mace, Read, Stedman, and Tidcombe was granted the diploma of the society.

UNIVERSITY OF DUBLIN.—The following degrees were conferred last week:—

Bachelor in Medicine, Surgery, and Obstetrics.—Ludovic Wright Crowe, William Steele Haughton, Henry Jellett, Robert Patton Lyle, *(in absentiâ)*; Robert C. B. Maunsell, Arthur Rhodes, Michael Joseph Smith *(antea Lic.)*, Richard Travers Smith, Randal Smyth.

Licentiate in Medicine, Surgery, and Obstetrics.—William Travers Homan.

Bachelor in Medicine.—Percy Vernon Dodd.

Doctor in Medicine.—William Payne Birmingham *(in absentiâ)*, Percy Vernon Dodd, Henry Marcus Eustace, George Gilbert Fiemyng, John Henry Head, Edward Vincent Legge, Frederick Edwards Rainsford, William Henry Playfair Vickers, Benjamin Hosford Steede.

A QUARTERLY general meeting of the Society for the Study of Inebriety will be held in the rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W., on Thursday afternoon, Jan. 3rd, 1895, when a paper will be read by Dr. David Walsh, entitled "Unwholesome Workshops and Drink."

DR. C. C. GIBBES of Surbiton, having lately retired from local private practice owing to ill-health, his former patients have subscribed to a testimonial of a purse of 200 guineas, together with an album containing, on vellum, lists of the names of the subscribers, some 200 in number, and an illuminated record of the circumstances of the presentation, expressing the regret of his patients at being deprived of his services and the high esteem in which the recipient is generally held. It is Dr. Gibbes' intention to continue his public duties as medical officer and otherwise, and it may be mentioned that he was third on the poll at the election on Tuesday for the newly created district council for Surbiton, for which there were twenty-seven candidates.

BEQUESTS.—Mr. Patrick Daly has bequeathed £100 to the Meath Hospital, £100 to St. Vincent's Hospital, and £25 to the Children's Hospital, Temple-street, Dublin.

FOOTBALL CASUALTY.—A youth, aged eighteen years, who fractured one of his legs in a match at Inverness, died on the 19th inst. in the Northern Infirmary from the effects of the accident.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A meeting of this society was held on Dec. 13th, Mr. F. Page, President, being in the chair. Dr. James Murphy showed a patient upon whom Enterectomy had been performed for Obstruction which had lasted for six days. Six inches of gangrenous intestine were removed and the ends united by Murphy's button. The latter was passed on the nineteenth day. Dr. Modlin showed a patient who had been operated upon for Traumatic Stricture. Dr. Robinson showed a boy with Dislocation of Both Ulnæ inwards; the injuries were produced at different times. The left radius was displaced slightly inwards; the right was in the normal position. Dr. Oliver and Mr. Williamson showed a girl from whom a Cerebral Tumour had been removed with the result of considerably lessening the symptoms. Dr. Oliver showed: (1) a man suffering from Charcot's Joint, and (2) a man with a Limited Muscular Atrophy. The President exhibited: (1) a boy who had been operated on for Suppurating Hydatid of the Liver; (2) two women upon whom Cholecystotomy had been performed; (3) a woman after removal of one Lobe of the Thyroid already showing Marked Atrophy of the remaining Lobe; and (4) a man with rapidly progressing and extensive Ulceration of the Face. Dr. Robertson showed: (1) a lad after Stack's Operation on the Mastoid; and (2) Papilloma of the Septum Nasi and the Inferior Turbinal. Dr. Richardson brought forward a patient who had been operated upon for Sarcoma of the Jaw. Dr. Limont showed: (1) a man with an Erythematous Rash of Uræmia; and (2) a woman with Universal Dermatitis. Demonstrations: Mr. Morison (with Mr. Markham, L.D.S.), Trephining by means of the Dental Drill and specially-shaped "Bits" devised by Mr. Markham; Dr. Metcalfe, New Portable Electric Light Battery; Mr. Williamson, Tetanus Antitoxin, with notes of a case treated, but ending fatally; the President exhibited a large Uterine Fibroid removed by Abdominal Section; and Mr. Richardson, a Meckel's Diverticulum.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A clinical meeting of this society was held on Dec. 18th. Dr. S. Johnston, President, was in the chair. Dr. Major showed the following three cases: 1. General Paralysis of the Insane occurring in a young man aged twenty years. There were mental deterioration and marked tremor of the tongue, lips, and hands. Scanning speech was not present. The rarity of the affection in one so young was noted. 2. Multiple Sclerosis (spinal form). The patient was a young woman with ankle clonus, increased knee-jerks, and very marked volitional tremor. 3. A young man whose left Lung showed marked signs of Fibroid Changes. No tubercle bacilli were found in the sputum. Drs. Adolf Bronner, S. Lodge, and T. C. Denby took part in the discussion. Dr. T. C. Denby showed a boy aged ten years who presented the symptoms of Pseudo-hypertrophic Muscular Paralysis, without having any hypertrophy of the muscles at the present time or a history of hypertrophy. Mr. Althorp, Dr. Major, and Dr. H. Bronner made remarks. Mr. Horrocks brought forward the following cases: 1. Two cases of Cleft Palate on which he had operated. 2. A child having a Congenital Deformity at the Anus (atresia ano-vaginalis). 3. A case of Excision of the Wrist and one of Excision of the Hip. 4. A Bursal Cyst which had been excised from a man's shoulder. The cases were discussed by Dr. H. Bronner, Dr. Major, Mr. Appleyard, Mr. Althorp, and Dr. T. C. Denby. Dr. Wood showed: 1. A woman who had a Wound of the Wrist dividing the Ulnar and Median Nerves and the Flexor Tendons. The ends of the divided structures were sutured, the result being recovery of sensation and a good grasp. 2. A boy who had had the Extensor Tendons of his Wrist and also the Bones divided. The bones and tendons were sutured with a very satisfactory result. 3. A Diffuse Sarcoma of the Neck. 4. An Ovarian Tumour showing a Twisted Pedicle. Dr. Clapman showed: 1. A child suffering from Cretinism who had improved under treatment by thyroid extract. 2. Two cases of Aneurysm. Mr. Appleyard and Dr. Johnston made remarks. Dr. A. Bronner showed: 1. Cases in which he had cleared out the Mastoid Antrum. 2. A patient whose common carotid he had tied for a Pulsating Exophthalmos, the result being excellent.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

GREENWOOD, A., L.S.A., has been appointed Medical Officer for the Haggerston East Sanitary District of the Parish of St. Leonard, Shoreditch.

HODGSON, CHARLES, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the County Hospital, York, vice A. C. Coles, M.D., B.Sc. Edin., resigned.

NESFIELD, R. W., M.B., Ch.B. Victoria, has been appointed a Resident Medical Officer of St. Mary's Hospital, Manchester.

RISELEY, STANLEY, M.D., M.S. Edin., has been appointed Senior House Surgeon to the Infirmary, Halifax.

RUSTON-HARRISON, G. H., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the Royal Berks Hospital.

SHAW, T. D. S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the North Sanitary District of the Cirencester Union.

SMITH, S., L.R.C.P., L.R.C.S. Eng., L.F.P.S. Glas., has been reappointed medical officer to the Falkirk Cottage Hospital.

SUTHERLAND, G. A., M.A., M.D., M.R.C.P., has been appointed Physician to the Out-patient Department of the Paddington-green Children's Hospital.

TREVETHICK, E. G., M.B., C.M. Camb., M.R.C.S., has been appointed Honorary Physician to the Cheltenham General Hospital, vice Inglis, resigned.

Vacancies.

CHELSEA, BELGRAVE, AND BROMPTON DISPENSARY, 41, Sloane-square, S.W.—Honorary Physician.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, London, S.W.—Two Honorary Physicians to In-patients. One Honorary Surgeon to In-patients. Three Honorary Physicians to Out-patients. One Honorary Surgeon to Out-patients. Honorary Pathologist and Registrar.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon and Dispenser. Salary £50 per year, with board, apartments, and laundress.

GERMAN HOSPITAL, Dalston, N.E.—Honorary Physician.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Two Assistant Physicians.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

PAROCHIAL BOARD OF THE BARONY OF GLASGOW.—Senior Assistant to the Medical Superintendent of the Barony Parochial Asylum, Woodilee, Lenzie, near Glasgow. Salary £200 per annum, with board, apartments, &c.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Junior Assistant House Surgeon, unmarried. Salary £50, with board, lodging, and washing.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon to the In-patients. Honorarium £50 per annum, with board and lodging in the Hospital. Also House Physician to the In-patients. Honorarium £50 per annum, with board and lodging in the Hospital.

VICTORIA UNIVERSITY (THE YORKSHIRE COLLEGE), Leeds.—Lecturer on Diseases of the Eye and Ear.

YORK COUNTY HOSPITAL.—Assistant House Surgeon. Salary £60 per annum, with board, rooms, washing, and attendance.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Births, Marriages, and Deaths.

BIRTHS.

CROMBIE.—On Dec. 21st, at Sidcup, Kent, the wife of James Crombie, M.B., of a son.

EVE.—On Dec. 21st, at Harley-street, W., the wife of Frederick Eve, F.R.C.S., of a daughter.

MARRIAGES.

ELLISON—MURRAY.—On Dec. 22nd, at St. John's, Southwick-crescent, William Augustine Ellison, M.A., M.B. Oxon., to Catherine May, only child of W. H. Murray, Asheley-Arnewood, Hants.

JAMES—KER.—On Dec. 21st, at Queen's-cross Free Church, Alexander James, M.D., F.R.C.P. Edin., to Louisa Stevenson, youngest daughter of the late Rev. William T. Ker, Deskford, Banffshire.

DEATHS.

ALDRICH.—On Dec. 22nd, in his 84th year, Pelham Aldrich, M.R.C.S. Eng., of Mildenhall, Suffolk.

NICHOLSON.—On Dec. 20th, at Greenwich, William Nicholson, M.D., youngest son of the late James Robert Nicholson, late of Thornton, Northumberland, aged 48.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

COVER TO THE LANCET.

THE Manager begs to announce that at the request of many advertisers, and to keep pace with the ever-increasing demand for "position" pages, it has been decided to issue a cover to THE LANCET, commencing with the New Year. The cover will be printed on the same kind of paper as the journal itself, thus ensuring uniformity of appearance with past issues. With this exception of the cover the journal will remain exactly as it was before. The Proprietors cannot consent to the insertion of advertisements in the centre of the paper—a position which has frequently been applied for, but which is annoying to the general reader.

THE INDEX TO THE LANCET.

THE Index for the current half-year is published in this issue, which completes the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

ABLUTION AFTER NECROPSIES.

To the Editors of THE LANCET.

SIRS,—It might be useful to many to know that staining of the hands, however deep, with Condy's fluid may be at once removed by immersing them in a mixture of "Sanitas" and water. To get completely rid of the smell which often clings to the hands after a post-mortem examination, or after contact with offensive pus, the following will be found to be a very reliable and effective method. The hands should be first well washed with soap and warm water, then thoroughly soaked in a strong warm solution of Condy's fluid, and finally rinsed in a mixture of "Sanitas" and water, strength about 1 in 4. The hands will then be perfectly clean and sweet, and quite free from stain.

I am, Sirs, yours faithfully,

J. O'REILLY, M.B.,

Guildford, Dec. 21st, 1894. Surgeon-Lieutenant-Colonel, A.M.S.

WE have received from the Johannis Company, Limited, of 25, Regent-street, a series of eight original fancy ball dress designs which that company are issuing to their customers as a souvenir of Christmas, 1894. The characters represented are Baccbante, La Merveilleuse, a Fairy, Arcadian Shepherdess, Carmen, Pansies, a Noble (*temp.* 1350), and King Johannis, the Covent Garden prize costume. In both design and colouring the pictures are prettily and tastefully executed, and during the present carnival season will, no doubt, be welcomed as suggesting ideas for juvenile dresses, and grown-up people who patronise the fancy ball will likewise be able to glean some hints and ideas from this novel souvenir.

WANTED, A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—Will some medical man kindly recommend a warm, dry, and sheltered place (West Kent, Surrey, Sussex, or Hants preferred) suitable for a patient suffering from rheumatic ophthalmia?

I am, Sirs, yours faithfully,

Dec. 26th, 1894. MELTON.

Without Fees.—There is no gratuitous route to medical diplomas. Fees must be paid for instruction. It is very occasionally possible for an industrious man to earn a little money as an unqualified assistant during his five years' course of medical instruction, but the sum so earned would in none but the rarest cases serve to support him and discharge his fees. And it becomes harder daily to obtain such posts.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 27th, 1894.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo.	Maximum Temp Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 21	30·15	N.W.	36	35	52	52	35	...	Foggy
,, 22	29·37	W.	48	44	72	50	36	...	Gale
,, 23	30·19	S.W.	40	38	61	49	38	...	Cloudy
,, 24	30·10	S.W.	49	48	54	52	40	0·07	Overcast
,, 25	30·45	S.W.	49	48	51	51	49	...	Raining
,, 26	30·50	S.W.	50	49	51	50	49	0·02	Overcast
,, 27	30·61	N.W.	40	38	59	44	38	0·06	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Drs. T. E. Stevens, Ilott, Amand Routh, Des Vœux, and Remfry. Dr. John Shaw: Peritonitis, its Nature and Treatment.—Dr. J. Inglis Parsons: The Disintegration of Organic Tissue by High Tension Discharges.

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Clinical Evening. Cases by Messrs. E. Owen and Wilkins, and Drs. Caley and Cagney.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. J. A. Fleming: The Working of an Electric Current. (Christmas Lecture.)

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Prof. J. A. Fleming: The Working of an Electric Current. (Christmas Lecture.)

SATURDAY.—ROYAL INSTITUTION.—3 P.M. Prof. J. A. Fleming: The Working of an Electric Current. (Christmas Lecture.)

During the week marked copies of the following newspapers have been received:—*Lancaster Guardian, Eastern Evening News, Western Morning News, Ayr Advertiser, Newcastle Journal, Warwick Times, Scotsman, Manchester Courier, Leicester Post, Huddersfield Examiner, Sussex Daily News, Irish Times, Sheffield Independent, Kent Coast Times, Morning, Manchester City News, Cork Daily Herald, Galignani Messenger, Liverpool Daily Post, Oriental Advertiser (Constantinople), Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Times of India, Builder, Citizen, Yorkshire Post, Reading Mercury, Pioneer Mail, Architect, City Press, Local Government Journal, Surrey Advertiser, West Middlesex Standard, Lynn News, Helensburgh Times, Norwood News, West Middlesex Advertiser, Cork Constitution, Canterbury Times (New Zealand), Glasgow Daily Mail, &c., &c.*

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V.—Dr. A. F. Voelcker, Lond.; Victoria Hospital for Sick Children, Lond., Secretary of; Victoria University, Leeds, Secretary of.

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Letters, each with enclosure, are also acknowledged from—

A.—Messrs. Adams and Co., York; Anderson's College Medical School, Glasgow, Secretary of; Atacama Mineral Co., Taltal, Chili.

B.—Sir James Crichton Browne, Lond.; Mr. B. Button, Flint; B.A., London.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnieres, Paris.